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RENEWING NATURE'S WEALTH

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Sketch in Algonquin Park, by Tom Thomson



RENEWING NATURE'S WEALTH





ONTARIO

A Centennial History of the Public Management of Lands, Forests & Wildlife in Ontario 1763 - 1967



ONTARIO DEPARTMENT OF LANDS AND FORESTS
HON. RENE BRUNELLE, *Minister*
G. H. U. BAYLY, *Deputy Minister*
1967

RENEWING NATURE'S WEALTH

BY
RICHARD S. LAMBERT, M.A. (OXON.)
WITH Paul Pross, M.A. (QUEEN'S)

FOREWORD BY
THE HONOURABLE
JOHN P. ROBARTS, Q.C., LL.D.
PRIME MINISTER OF ONTARIO

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CONTENTS

FOREWORD by the Hon. John P. Robarts, Prime Minister of Ontario

PART I: THE AGE OF WASTE, 1763-1841

- 1 The Great Forest 1
- 2 The Settlement of the Land 14
- 3 The Early Timber Trade 29
- 4 The Beginnings of Administration 49

PART II: CONSOLIDATION AND CONSERVATION, 1842-1900

- 5 The Land Surveyor and his Work 61
- 6 The Progress and Regulation of Land Settlement 82
- 7 The Department Takes Shape 101
- 8 The Golden Age of Timber Exploitation 124
- 9 The Ferment of New Ideas 150

PART III: WIDER RESPONSIBILITIES, 1901-1940

- 10 The Rise of Forestry 177
- 11 Protecting the Forest from Fire and Disease 202
- 12 The Start of the Air Service 234
- 13 Pulp and Paper – A New Forest Industry 250
- 14 Algonquin, Rondeau, Quetico and other Parks 277
- 15 Settling New Ontario 300
- 16 Changes in the Department through War and Depression 313

PART IV: MANAGING NATURAL RESOURCES, 1941-1966

- 17 Politics and Timber 1934-1943 335
- 18 The Reorganized Department 354
- 19 Managing and Cropping the Forest 390
- 20 Modern Planning and Management of Public Land 424
- 21 Fish and Wildlife Management 446
- 22 The Expansion of Parks and Recreation 476
- 23 The Work of Research 500
- 24 The Department and the Public 524
- 25 The Department in its Wider Setting 538

ACKNOWLEDGEMENTS AND CREDITS 553

NOTES AND REFERENCES 557

BIBLIOGRAPHY 597

INDEX 617

ILLUSTRATIONS

IN COLOUR

- Sketch in Algonquin Park, by Tom Thomson *frontispiece*
Two Water-Colour Sketches, from the field note-books of the original surveys by
T. B. Speight, O.L.S. of the subdivision of the Township of Kerns in 1888, and the
subdivision of the Township of Ledger in 1894 *facing page 62*
Forest fire in Godfrey Township, Cochrane District, 1948 *facing page 214*

IN BLACK AND WHITE — PORTRAITS

- The Hon. Peter Robinson, first Commissioner of Crown Lands, 1827-1837 (Silhouette) 23
Sir David W. Smith, first Surveyor General of Upper Canada, 1794-1804, and his
home and office at Maryville Lodge, Toronto 51
Four Early Commissioners of Crown Lands:
Hon. Dr. John Rolph, 1851-3 103
Hon. Philip Vankoughnet, 1858-62 103
Hon. Stephen Richards, 1867-71 103
Hon. Sir R. W. Scott, 1871-3 103
Hon. Joseph Cauchon, Commissioner of Crown Lands 1855-7 105
Andrew Russell, O.L.S., Assistant Commissioner of Crown Lands, 1857-1869 105
Hon. Timothy B. Pardee, Commissioner of Crown Lands, 1873-1889 159
Aubrey White, Assistant Commissioner of Crown Lands 1887-1905 and Deputy
Minister of Lands and Forests 1905-1915 159
Alexander Kirkwood, chairman of the Royal Commission on Forest Reservation,
1893 and title page of his pamphlet on Algonquin Park, 1886 166
The Rise of Forestry:
William Little, prominent Montreal lumberman 180
James Dickson, O.L.S. Inspector of Crown Lands Surveys 180
Thomas Southworth, Clerk of Forestry 1895-1899 180
Hon. E. J. Davis, Commissioner of Crown Lands 1899-1904 180
E. J. Zavitz, father of forestry in Canada and Deputy Minister of Forestry, 1925-
34 191
Dr. B. E. Fernow, first dean of the Faculty of Forestry, University of Toronto,
1907 191
W. Roy Maxwell, first Director of the Provincial Air Service 239
Hon. F. Cochrane, Minister of Lands, Forests and Mines, 1905-11 259
Albert Grigg, Deputy Minister of Lands and Forests, 1915-21 319
Walter Cain, Deputy Minister of Lands and Forests, 1921-41 319
Hon. E. C. Drury, Prime Minister of Ontario, 1919-23 320
Hon. G. H. Ferguson, Prime Minister of Ontario, 1923-30 320
Hon. F. Mitchell Hepburn, Prime Minister of Ontario 1934-42 327
Hon. Peter Heenan, Minister of Lands and Forests, Ontario, 1934-41 327
Hon. N. O. Hipel, Minister of Lands and Forests, 1941-43 359
Frank A. MacDougall, Deputy Minister of Lands and Forests, 1941-1966 359
Deputy Minister F. A. MacDougall servicing his plane at Oba Lake, 1948 356
Dr. G. A. MacCallum, chairman of Ontario Game and Fish Commission, 1892 448
Dr. W. J. K. Harkness, Chief of Fish and Wildlife Division, 1946-1960 448
Jack Miner banding a wild goose at Kingsville, Ontario 471
Tom Thomson fishing in Algonquin Park 293

IN BLACK AND WHITE — OTHER ILLUSTRATIONS

- Original Forest at Springwater Creek near Aylmer, Ontario 8
Giant Pines in Algonquin Park 8

Timber rafts at the Junction of the Ottawa and St. Lawrence Rivers	43
Timber slide and bridge on the Ottawa River	43
Philemon Wright's Mill on the Chaudière c. 1820	33
Muley saw for cutting up square timber	38
Timber barge for export of square timber	48
Hewing square timber	38
Breaking a log jam	40
A camboose camp	36
Then and Now:	
(a) Portage difficulties with old-time surveyor's equipment	68
(b) Early surveyors in camp	69
(c) Modern helicopter moving men and equipment	69
Thomas Devine and specimen of his split-line method of making field notes	72, 73
Old-time survey instruments	75
Modern survey instruments	76
Survey line looking north	79
Land Settlement:	
(a) Settler's location ticket, 1900	87
(b) A pioneer's first home	87
Settler's Hut on the Opeongo colonization road, Muskoka, 1901	109
Old-time lumberman's hotel, Jeffery's at Rockingham	126
Loggers at Work:	
(a) Logging team in Muskoka, 1900	129
(b) Loggers sweeping Aumond Creek, 1902	130
Raft of square timber on the Ottawa River at Hull	145
Poster advertising auction sale of timber berths, 1877	141
Log flume on the Mississagi River, 1947	147
"Does It Pay?" A cartoon by F. W. Bengough in the 1890's	143
Wasteful Operations:	
(a) Sawing timber by hand, 1913	139
(b) Waste on a saw-log operation	139
Decline of Salmon in the Great Lakes:	
(a) Indians spearing salmon by torchlight. From a painting by Paul Kane, 1846	152
(b) Samuel Wilmot's fish hatchery at Newcastle, 1887	152
"Game Laws of Upper Canada", poster issued by the Sportsmen of Toronto, 1860	155
The pleasures of solitude; moonlight canoeing on the Lake of Two Rivers, Algonquin Park	171
Dr. Judson Clark in Algonquin Park	187
First forestry class in Rondeau Park, 1908	188
Reforestation in Norfolk County:	
(a) An abandoned farm	200
(b) Sand-dunes covering old farm fence	200
(c) Red Pine plantation made in 1913 at provincial forest station	200
Dr. Fernow with class in the tree nursery in Norfolk County, 1912	196
Fighting Fires:	
(a) Digging the fire line	206
(b) After the fire. A burned-out area	219
The Great Matheson Fire, 1916:	
(a) Matheson school after the fire	211
(b) Town of Matheson after the fire	211
Modern steel fire-tower at Myers Cave, Barrie Township, 1955	217
The Spruce Budworm:	
(a) Close-up of the budworm	227
(b) View of damaged trees	227
(a) Girls collecting spruce-budworm larvae	230
(b) Feeding-scars made by elm-bark beetle	230

x / LIST OF ILLUSTRATIONS

Early Days in the Air Service:

- (a) Group of early pilots, 1924 240
- (b) Landing H-boats at Sault Ste. Marie slipway, 1962 240

Early days in the Air Service:

- (a) Changing an H-boat Liberty motor at Orient Bay, 1925 244
- (b) DeHavilland Moth "Wren" on slipway at Sudbury, 1922 244

Types of modern plane:

- (a) 1948 Beaver 247
- (b) Turbo-Beaver in the air, 1965 247

Otter Aircraft "Ody" dropping a load of water 249

Wasteful Practices:

- (a) Example of bad utilization by a company exporting pulpwood 257
- (b) Waste on a pulpwood tie and log operation 257

Pulpwood booms at Port Arthur, 1951 270

Alternate strip-cutting in a spruce forest, Port Arthur District 262

- (a) Selling souvenirs in Rondeau Park, 1899 282
- (b) Shevlin-Clarke logging dam at Pickerel Lake, 1899 282

Poster, 1893, announcing forest and game reservation in Algonquin Park 289

Algonquin Park Scenery:

- (a) Oxtongue River from Tea Lake Dam 297
- (b) Opeongo Lake from the air 297

Emigrating to New Ontario:

- (a) Ontario immigration office, 1913 309
- (b) Party leaving the Old Country for Ontario, 1913 309

Conservation officer checking hunters' licences 385

Red Pine plantation thirty years old 411

Modern tree-harvester at work near Port Arthur 406

Fish Conservation:

- (a) Fishery licence for hoop nets, 1888 453
- (b) Conservation officer investigating poacher's traps, 1949 453
- (a) Banding pheasants 458
- (b) Modern fish hatchery at Tarentorus, from the air 458

Stream polluted by a garbage dump 461

Wild-life studies:

- (a) Bear cub in a tree 467
- (b) White-tailed deer in snow 467

Amenities of Provincial Parks:

- (a) Relaxing in the sun at Grundy Lake Park 485
- (b) Camping on the shore of Windy Lake Park 485

Nature study in Provincial Parks:

- (a) Bird-Watching in Rondeau Park 491
- (b) A conducted nature hike 490

Cloth poster on duck shooting in Rondeau Park, 1896 488

Historic Building in a wilderness area:

- (a) Wilderness Castle, White Otter Lake, Kenora 493
- (b) Jim McQuout, builder of the Castle, beside his shack 493

Fighting the Sea-lamprey:

- (a) Close-up of sea-lamprey's mouth 513
- (b) The new hybrid trout, the splake 513

White Pine Blister Rust:

- (a) White pine badly affected by blister rust, 1954 504
- (b) Spraying wild currant bushes with herbicide 504

Planting Tuber Seedlings:

- (a) Tuber seedlings 507
- (b) Transplanting machine 507
- (a) Scarification by Rome plough 522
- (b) Moose-tagging from a helicopter 522
- First Provincial Parks exhibit, 1921 534

MAPS

- Upper Canada about 1841 26
- Indian treaties and purchases 15
- Survey fabric and development in the Province of Ontario 64-65
- Land disposition by statute authority 84-85
- Chief land and timber agencies in 1895 136
- Portion of the James Bay watershed 236
- Original area of Algonquin Provincial Park and subsequent additions 278-279
- The Great Clay Belt of "New Ontario" 302
- Major field offices in 1929 337
- Administrative districts and regions 372
- Company and Crown timber management units and dominant function of the forests 399
- Typical land management plan of part of the Tweed Forest district, showing capability for agricultural production 439
- Typical land management plan of part of the Tweed Forest district, showing capability for timber production 440
- Distribution of moose, woodland caribou, deer and pheasant in Southern Ontario 468
- Provincial Parks in Ontario 482-483
- Sketch-map of proposed Georgian Bay Recreational Reserve, 1966 497

DIAGRAM

- Services on various projects provided by the Department in collaboration with other Ontario Government Departments, Boards and Commissions
- In pocket on inside end cover

PICTURE CREDITS

- Ontario Department of Lands and Forests — all photographs, plates and maps are credited to the Department, unless otherwise indicated.
- Ontario Department of Public Records and Archives, Toronto — pp. 51 (upper), 87 (lower), 103, 105 (lower), 109, 130, 159 (lower), 259, 320, 327, 359.
- Faculty of Forestry, University of Toronto — pp. 166 (upper), 180 (upper left).
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- McCord Museum, McGill University — p. 33.
- Toronto Public Library — pp. 23, 51 (lower).
- Royal Ontario Museum — p. 152 (upper).
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FOREWORD

It undoubtedly will come as a surprise to the majority of the readers of this book to discover that *Renewing Nature's Wealth* is much more than a history of one of the departments of the Government of the Province of Ontario: it is a vital component of the history of Ontario.

And although the book's subtitle suggests that this is a centennial project, its scope is much greater than a history of the past one hundred years. The records of the Department of Lands and Forests are continuous from 1827, when the first Crown Lands Commissioner, Peter Robinson, was appointed. Indeed, that officer only took over, as part of his job, duties which had in fact been performed for some forty years by the Surveyor General of Upper Canada. So the story told here is a history of rural Ontario, from the time

when the first permanent encroachments for settlement were made upon the great forest that had covered most of the land for centuries.

The main theme of the book is devoted to the impact made by a civilized people upon a forested land. Since the Crown, by treaties with the Indians, originally held title to the lands, the waters, the forests and their fish and wildlife populations, public ownership of these natural resources constituted a fabulously rich heritage. It also constituted awesome responsibilities of husbandry and guardianship; heavy indeed are the obligations vested in the Department of Lands and Forests to hold, manage, and save in trust for generations yet unborn the natural wealth of this Province.

In retrospect, some people feel that many mistakes were made by those entrusted with the responsibilities of management. Relatively, the instances of mis-management are few and so much less deleterious than they might well have been. By and large, we are the inheritors of a vast, beautiful and substantially well-managed land, forest and wildlife community for which we ought to be eternally thankful and upon which our thriving economy is vastly dependent.

After man himself, to whom initially much of the forest was an enemy to be eradicated as quickly as possible, fire, insects and disease were, and continue to be, the chief perils of the forest. Consequently, it is not surprising that Ontario has long been in the forefront in developing methods and an organization to combat forest fires. Ontario has also played a vital role in the development and implementation of sound, scientifically-based programmes of surveying, land management, timber management, fish and wildlife management, and the recreational use of natural resources. The roles of, and our indebtedness to, such pioneers in these fields as Peter Robinson, James Dickson, Aubrey White, E. J. Zavitz, Alexander Kirkwood, W. J. K. Harkness, Frank MacDougall and others are here brought together for the first time.

In the earliest days of colonization of the Province, land surveying and land settlement tended to go hand in hand with lumbering operations. Removal of trees for trade, commerce and local utilization facilitated surveying and clearing for roads and settlement. But, as clearing of potential agricultural areas and urban development progressed, the need for preservation of the remaining forest areas – especially their protection from fire – became of increasing

importance. Inevitably fire protection, surveying, timber management, and land disposal organizations developed.

The increasing public acceptance of the need to "manage" the land and its forests first became recognizable in the 1880's. With the hiring in 1912 of E. J. Zavitz, our pioneer Provincial Forester (still living among us in ripe old age) the arrival of the "professional" had begun. The transition from the concept of the inexhaustibility of the forest and its wild inhabitants through an era of extreme protectionism, to the age of "wise use" was in progress. Like the regulation of the disposal of Crown lands, the regulation of timber cutting has been a prime responsibility of the Department since earliest days. Over the years, the emphasis has shifted from regulation and revenue production alone to include protection from fire, insects and disease, reforestation and regeneration, inventory, and other aspects of scientific management and harvest.

Similarly, the concern with fish and wildlife resources has progressed from a popular concept of inexhaustibility, through excessive protection, to "wise use". There were biologists in the Department of Game and Fisheries prior to its amalgamation with the Department of Lands and Forests in 1946, but they were few and their acceptance by the public whom they served generally was grudging, at best. Today, the people of Ontario are well served by a substantial number of well-trained biologists and technical staff whose activities are soundly based and abilities well-respected.

Although the idea of the importance of the recreational use of the land of Ontario was expressed by Alexander Kirkwood well before the beginning of the present century, the general public acceptance of this concept did not make substantial progress until after the end of World War II. The increase in both affluence and time available for outdoor activities that has marked the past two decades has gone hand in hand with a very rapid upsurge in the demand for and appreciation of the need to protect and make available areas for hiking, camping, picnicking, nature study, sight-seeing, hunting, fishing, and associated outdoor pursuits.

Growing, too, is an appreciation of the need to set aside and preserve inviolate against all development and commercial intrusion areas possessing unique or unusual attributes, be they forest communities, beach areas, geologic formations, sand dunes, marshlands, areas of unusual botanical significance, areas inhabited by rare, unusual or disappearing forms of wildlife, or any of a long list of

situations which, once lost to “development”, can never be replaced. And once gone, Ontario and its people will be markedly and irretrievably the poorer for their loss.

All of these progressions are bringing a new meaning and importance in the twentieth century to the land itself. Down to recent years, the management of land comprised its sale or gift to pioneer farmers, the leasing of timber limits, the encouragement of agriculture and the settlement of special groups of war veterans or victims of unemployment. Today, however, land has a wider significance. The concept of the “multiple use of land”, an appreciation that the use of land for one purpose does not exclude its use for others, is coming to be better understood and more widely accepted.

Finally, I should like to draw to the reader's attention an almost incidental contribution which has been made by the Department of Lands and Forests.

Over the years there has evolved, with the astute direction and encouragement of senior management, an organization that may well be unique in the field of natural resource management. In this discipline, it is inevitably the man “in the field” who actually carries out the programmes. It is what that man actually does that counts, not what the Minister, or the Deputy Minister, or the Branch Chief, or any of the other senior officials say, that makes the programme a success. To be successful, a programme must, of course, be well conceived. But it is not sufficient that its various specialized segments come together into a rational whole at the highest levels; it must also, and perhaps especially, come together at the lowest operating levels.

The foresters, biologists, engineers and other specialists at the intermediary levels tend to look only at those aspects of the total programme which most directly concern or interest them. But it is the forest ranger, conservation officer, park ranger and each individual employee at the operating level who must inter-weave the various specialized segments into a unified programme. It must make sense to him, his superiors, the woods operators, tourist operators, hunters and fishermen, campers and picnickers, and all those who are in some way affected by the programmes of the Department of Lands and Forests – virtually all the people of Ontario and those who come to visit us.

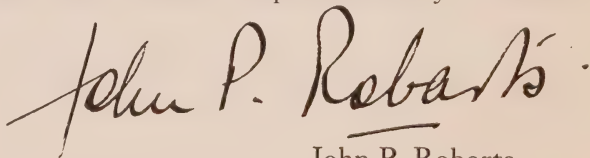
In a province as large and as climatically and ecologically diversified as Ontario, the staff of the Department of Lands and Forests

is called upon to operate in a wide variety of conditions. To be close to the resources and to those who use them, there must be a considerable number of offices dispersed throughout the Province. This means that in many cases there will be but a few men in each office, perhaps only one; and they, or he, must be trained and authorized to take action. If there is a forest fire, the forest ranger must know what to do and be empowered to take action to do it; if there is a problem relating to fish or other wildlife, the conservation officer must be able to deal with it properly and expeditiously.

In recent years, a vast and improved radio network has combined with aircraft and many new roads through areas long accessible only by canoe in summer and snowshoe in winter to bring district, regional and head offices "nearer" the individual employee in the field. But there is and probably always will be a need for these employees to develop their resourcefulness, intelligence, and integrity to the full and for the central office to arm them with wide powers of authority and responsibility.

One dividend of the Department's policy of developing these attributes in all its employees has been that there has been developed a body of well-trained, competent civil servants whose services have been much in demand throughout the Ontario public service as well as in the public services of other Governments, in business, in academic circles, and elsewhere. What greater contribution could there be made to the development of this Province's "natural resources" than the concomitant development of its human resources?

Those who read this book will find it not only an exciting record of social achievement, but also a fascinating story of many striking personalities. To the author, Mr. Richard S. Lambert, and the many individuals who have been associated with him in its compilation, I extend heartiest congratulations. To the people of Ontario, I hope that you will find a substantial measure of pleasure and pride in this undertaking and that it will encourage students and others to undertake further research into the little-explored history of Government in Ontario.



John P. Roberts,
Prime Minister of Ontario.

PART I: THE AGE OF WASTE 1763-1841

TREES

When thou shalt besiege a city a long time, in making war against it to take it, thou shalt not destroy the trees thereof by forcing an ax against them: for thou mayest eat of them, and thou shalt not cut them down (for the tree of the field is man's life) to employ them in the siege:

Deuteronomy, XX, 19

Advice of the Laird of Dumbiedykes to his son and heir: "Jock, when ye hae naething else to do, ye may be aye sticking in a tree; it will be growing, Jock, while ye're sleeping."

Quoted by James Little of Montreal at the American Forestry Congress at Cincinnati, 1882.

1

THE GREAT FOREST



“No one who has a single atom of imagination,” wrote Mrs. Anna Jameson on a sightseeing tour of southwestern Ontario in 1836-37, “can travel through these forest roads of Canada without being strongly impressed and excited. The seemingly interminable line of trees before you; the boundless wilderness around; the mysterious depths amid the multitudinous foliage where foot of man hath never penetrated – and which partial gleams of the noontide sun, now seen, now lost, lit up with a changeful, magical beauty – the wondrous splendor and novelty of the flowers – the silence, unbroken but by the low cry of a bird, or hum of insect, or the splash and croak of some huge bull-frog – the solitude in which we proceeded mile after mile, no human being, no human dwelling within sight –

are all either exciting to the fancy, or oppressive to the spirits, according to the mood one may be in¹ . . . How savagely, how solemnly wild it was! So thick was the overhanging foliage that it not only shut out the sunshine, but almost the daylight; and we travelled on through a perpetual gloom of vaulted boughs and intermingled shade . . . The timber was all hard timber, walnut, beech and bass-wood, oak and maple of most luxuriant growth; here and there the lightning had struck and shivered one of the loftiest of these trees, riving the great trunk in two and flinging it horizontally among its companions. There it lay in strangely picturesque fashion, clasping with its huge boughs their outstretched arms as if for support."²

Mrs. Jameson was one of a small group of writers in the first half of the nineteenth century who were almost the last persons who had the opportunity to describe a part of the great primaeval forest in all its glory – the forest that had covered Ontario ever since the days of Champlain and Brulé and probably long previously. The Jameson group naturally underlined different traits of the forest that struck each of them specially. Thus Sir George Head (1838) admired the stupendous bulk, great age, magnificent outline and tranquil gloom of the giant trees.³ David Wilkie (1837) stressed "the unnatural and powerful silence" that reigned through the forest.⁴ Samuel Thompson, in his reminiscences, was more struck by the noise of the wind that enveloped the tree tops, "a low surging sound like the moaning of breakers in a calm sea, which gradually increases to a loud boisterous roar, still seemingly at a great distance." He could recall, too, the patriarchal giants six yards in girth and sixty in height, that alone grew tall enough to catch the breeze, waving and whirling their "huge fantastic arms wildly at a dizzy height above your head."⁵ There were also practical men who watched their feet closely as they struggled through the fallen cedars of the Huron Tract and groaned at the "dreadfully fatiguing" backwoods travel, with its tripping over snags and its plunging waist-deep into swamps.⁶ No doubt the unfavorable aspect of the forest came uppermost to the minds of those in particular who had to make their future homes there. Richard Bonnycastle in 1841 voiced the sentiment of "horror" which the infinite loneliness of the forest inspired in many settlers in North America.⁷

The forest which thrilled Anna Jameson and repelled Richard

Bonnycastle was among the spoils of war that had fallen to the British Crown in 1763; a huge tract comprising 412,582 square miles, larger than the combined area of the two kingdoms, Britain and France, that had fought for it. Nearly one sixth of the area was water; in fact, it was bounded on nearly all sides by water and was therefore virtually an island. Its natural boundaries were two great rivers, the St. Lawrence and the Ottawa, four great lakes, Ontario, Erie, Huron and Superior, and (in the north) the ocean at Hudson and James Bays. Altogether, the land measured roughly a thousand miles northward from the Detroit River to James Bay, and another thousand miles westward from the height of land in Quebec to the far side of the Lake of the Woods. Virgin forest covered nearly the whole of what is now known as Ontario.

This primaеval forest had grown up since pre-historic times when, during successive ice ages, glaciers had covered the land with thick ice. As this ice melted after the last ice age it left behind it a series of glacial seas that gradually shrank to the dimensions of the present day Great Lakes, the St. Lawrence Estuary and smaller waters.

When the dry land emerged at last between the waters, it was not geologically uniform, but consisted of two contrasting regions. The southern and smaller of these, fifty thousand square miles in extent, was (except for its Pre-Cambrian northern section) covered with a glacial deposit known to geologists as "ground moraine". It was a mixture of clay, sand and stone, overlying sedimentary beds of limestone, shale and sandstone. This soil was a fertile loam.

The northern and much larger region was very different. It belonged to the so-called "Pre-Cambrian Shield", a deep mantle of igneous and sedimentary rock that spread out east and west across the whole of northern Canada, and as far south as a line drawn between Kingston on Lake Ontario and Parry Sound on Georgian Bay. The Shield included many granite boulders covered with a thin sandy or peaty soil, interspersed with pockets of clay and sand. Most of it was unsuitable for cultivation.

Naturally, the two regions held different potentialities for man. Only the southern region was, when cleared, generally capable of being farmed. The northern region, on the other hand, while arable in a few spots – notably the so-called "Clay Belt" – was chiefly remarkable for the enormous mineral wealth hidden in its rocks.

This potential was only guessed at in the eighteenth century and first explored towards the end of the nineteenth century. It is still nowhere near fully revealed even at the present time.

Both regions were well suited to forest growth; but the variations in soil and climate made this forest very diverse in character.

If a traveller had been able to explore the whole of Ontario from south to north in those days (which, of course, was impossible), he would first have found, along the north shore of Lake Erie, certain kinds of trees that were common all through the eastern United States as far as the Carolinas – such as chestnut, magnolia, tulip-trees, paw-paw, and sassafras.⁸ Across the well-drained plains of most of southern Ontario, he would have found quantities of sugar maple, elm, beech, basswood, walnut, butternut, black cherry, red, white and bur oaks. On the belts of clay around Niagara, along the shores of Lake Ontario and Lake Huron, eastern Georgian Bay and the lower Ottawa River, grew a profusion of elm, ash, hickory, blue beech, silver maple, swamp, white and pin oaks. On the drier sand-plains north of Lake Erie and in the Ottawa Valley grew stands of white pine, with black and scarlet oaks. Specially dry or droughty sites were occupied by red cedar and sumach.

Between the Ottawa River and the eastern shore of Georgian Bay, the forest consisted mainly of broad-leaved hardwood trees. On the uplands were sugar maple and beech, with some hemlock and white pine, especially near the shore. The less well drained parts of the area contained elm, ash, blue beech, silver maple and yellow birch.

But the extensive sandy plains that occupied much of this area, and had once, long ago, formed the bottom of the vanished Lake Algonquin, now supported magnificent stands of the finest and most prized of all the forest trees – white and red pine. In the swampy areas, on the other hand, white cedar was the commonest growth with, on the higher ground towards the north, tamarack, spruce and balsam.

On the lowlands of eastern Ontario, along with the valley of the St. Lawrence, our imaginary traveller would have encountered great stretches of maple, white cedar and juniper. Wherever the soil was sandy, white and red pine were again in profusion. Poorly drained areas carried dense thickets of white cedar. Also, he would have noticed considerable stretches of sphagnum bog covered with a thin growth of tamarack.

That part of southern Ontario that fell within the Pre-Cambrian Shield was the region where the white pine flourished most of all. Red and white pines were the most characteristic trees along the north shore of Lake Huron and the eastern shore of Lake Superior. West of Lake Superior the white pine tended to give way to the red. On dry sandy plains, jack pine was the prevalent tree.

When the traveller penetrated further north, away from the vicinity of the Great Lakes, he would have found black spruce the dominant tree, growing specially densely wherever the soil was clay. There, too, he would find tamarack, white spruce, balsam fir, aspen and white birch. But on dry sandy plains and rocky ridges, jack pine again became the prevailing tree.

In the far north, near the shores of Hudson and James Bay, the traveller would have lost himself in muskeg and swamp. Here the forest thinned out and the trees were stunted and patchy. The chief species growing here was the black spruce, with some white spruce, white birch and tamarack.

Altogether, over fifty species of trees grew in the Ontario forest, affording shelter to an abundant wildlife of birds, mammals and insects – not to speak of the fish that teemed in its waters. This wildlife in its turn supported a scanty population of a few thousand Algonquin and Iroquois Indian hunters and cultivators, whose scattered villages and clearings formed the only man-made breaks in the continuity of the forest. Along the trails and waterways that connected these villages had come, in the seventeenth and eighteenth centuries, various Europeans – French *coueurs de bois* and missionaries, and English fur traders – to explore, convert the natives, or exploit the apparently limitless supply of fur-bearing animals, especially beaver. But all these were passing visitors, except for the short-lived Jesuit Mission to the Hurons south of Georgian Bay and the soldiers and traders who built and occupied forts and trading posts at key points along the perimeter of the forest.

Down to the close of the eighteenth century, the primaeval forest remain virtually intact. No Europeans had yet systematically tried to cut the timber, clear the land and make their homes in its midst. Of course, the forest as a whole was not the dense continuum that Mrs. Jameson's description of part of it suggests. There were always gaps, caused by soil conditions, storms and other natural factors, including fires kindled by lightning or Indians. The Indians, making

a living mainly by hunting, were of course part of the forest life; they helped keep the wildlife within reasonable bounds, and either multiplied slowly or thinned themselves out by inter-tribal warfare.

The forest and its denizens thus formed what biologists today term an "eco-system", through which the energy of sunlight flows to create a great variety of inter-dependent species. "Every living thing in it depends on the capacity of the trees to manufacture organic materials by photosynthesis. Insects, birds and animals feed on trees and, in turn, become food for parasitic and predacious species. Innumerable micro-organisms also share in the flow of energy and the interaction of all these forms produces a more or less stable system. The members of the various species are constantly fluctuating, but there is a tendency toward equilibrium as long as the forest remains undisturbed. The greater the variety of plants and animals in the forest, the less likely they are to fluctuate in numbers."⁹

The equilibrium of the primaeval forest might have been maintained for many more years, but for the consequences of the white man's feuds, culminating in the Seven Years' War and the conquest of New France by the British. During the century and a half that followed, the density of the forest began at last to give way under the blows of the lumberman's and settler's axes. First, from about 1776-1836, the giant oak trees were felled for use as masts, spars and hulls in the British Navy. Next, during the Napoleonic wars, when Britain encouraged North American timber suppliers through a preferential tariff, the red and white pines were cut and squared for export to the United Kingdom, for re-sawing there. After the early 1850's, when Britain changed its trade policy and a reciprocity treaty was signed between Canada and the United States, the saw log industry (mainly pine but also hardwood) grew at a tremendous rate. Finally in the twentieth century the spruce and smaller trees were ground up or chemicalized into wood pulp. Today vast areas of timber still remain to be cut in northern Ontario; but throughout southern and much of central Ontario the primaeval forest has virtually vanished. Few now can share the experience of John White, the Fellow of Queens College, Cambridge, who as late as 1870 described the state of the southern forest as he saw it:

Plunge into the forest and see it as it makes itself, without the ordering hand of man—now dense and now thin—trees of different kinds

not generally blended together in intermixture, but standing apart as nature has sorted them, and as, in the great struggle for existence, each kind, ousted from elsewhere, has been forced into the station best fitted for its support—trees of all ages fighting together for bare life—some vigorous and freshly green and feathered down to the very ground—some weakly and faded, and only flinging out here and there ragged and ill-balanced branches—some, that are mere dead corpses and have fallen aslant out of their places, bruising and breaking the living—some that, with their lower branches all torn and maimed, have yet stretched up out of the throng and seem as if straining all the life within them to peer over the heads of their fellows and catch glimpses of how the fire, their deadliest enemy, is spreading havoc nearer and nearer.¹⁰

In southern Ontario a few scanty remnants of the *primaeval* forest have been preserved for us by the efforts of the conservationists. For example, at Springwater Creek, Aylmer, 276 acres of white pine, beech, red and white oak, black cherry, basswood, yellow birch and poplar have survived occasional logging incursions, and are held “to represent very closely the appearance of the original forest 150 years ago.”¹¹ Visitors can find a similar tract of 651 acres (known as Backus Woods) in nearby South Walsingham Township, containing the same species with the addition of tulip, cottonwood and black gum. Another fragment of the original forest was recorded as still existing at Rondeau Park in 1894, by the first Park Ranger, Isaac Gardiner. He termed it “probably the largest and finest block of timber left in this section of the Province,” adding that “it is doubtful whether any other part of America of equal area could present a greater number of distinct species, or a more splendid growth of individual trees.”¹² Since Gardiner’s day, Rondeau’s *primaeval* forest has become a wilderness area, with the object of preserving its original character.

Was the *primaeval* forest different in kind, or only in amount and density, from what is left today? To judge from reports made by early surveyors, the basic composition of the forest has not altered over the centuries as much as might be imagined; or rather, it has altered in short cycles which tend to return to a long-term norm determined by climate and soil. The forest is made up, not of static objects, but of living things that are always in course of developing. Even before the coming of the first European settlers, it will have passed through many successive cycles of change, brought about by



Original forest at Catfish Creek, Aylmer, Ontario



Giant pines in Algonquin Park

the natural effects of maturation, disease and accidental fires. The primitive forest – especially the major stands of white pine in the Ottawa Valley – probably contained a high proportion of fully-mature or over-mature trees. These from time to time fell down or, as Mrs. Jameson testified, were struck down by lightning. Lightning caused (and still causes today) extensive gaps, especially where a ‘complex’ of local thunderstorms occurred. Over-mature trees would tend to bear a large number of seeds and might be expected to replace themselves in a short time with self-sown seedlings of their own kind. However, repeated fires at the same spot would interfere with the cycle of replacement, since the younger trees would not have grown enough between fires to be able to seed so freely. In that case, the white pine might tend to be replaced by jack pine, which seeds itself more readily; alternately, poplar or other shoots might sprout up as suckers from their own partly buried roots. Thus nature might replace a stand of white pine by a grove of poplar, changing the face of the forest at this point. Poplars, however, are short-lived trees that deteriorate quickly. So, within say a hundred year cycle, the white pine might supervene and grow again to maturity on the ruins of the poplar.

While the composition of the forest remains basically constant, its density does not. In this respect the forest was bound to change with the coming of civilization. Man approached the forest originally to open the country up for settlement and the practice of agriculture. To quote the Clerk of Forestry’s Annual Report for 1899, “until quite recently, Ontario was regarded as a purely agricultural country, adapted only to agriculture, in which timber was not considered a profitable crop. The aim of our legislators was to clear the ground for general farming purposes, and in doing so to first dispose of the most valuable timber to the best advantage.”¹³ To this end – profitable sale of timber first, followed by settlement – the Government maintained control over all ‘wild land’ in order that the process might be carried out effectively. The need for agricultural land was so urgent that considerable areas of *primaeval* forest were burned over by would-be settlers in order to hasten the process. No attention was paid to classifying the use of the land, or to the maintenance of soil fertility. Such a course was beyond the resources and mentality of the early nineteenth century.

Furthermore, the character of the people who came to Ontario

was itself moulded by the territory they came to occupy. Something of what Gulick suggests in his study of *American Forest Policy* is true also of Canada. "This wide and empty continent changed the character of our people. They all came from lives of caution and land conservation, but here they became a new people with a new character. This continent released their energies; freedom, initiative and self-reliance blossomed, as did warm sympathy, classless equality and intense regional group loyalty. We also released a ruthless competition, a get-rich-quick morality and a wasteful destruction of natural resources."¹⁴

Not until the latter half of the nineteenth century was it realized that so much timber had been wastefully cut, to reveal land that would never be profitable for farming. The cutting down of all these trees naturally caused a serious disturbance in the equilibrium of the primaeval forest. This had four consequences, all of which posed great problems to future generations. They were:

1. A drying up of the streams, lakes and rivers—the water system which had been protected by the forest.
2. An increase of man-made fires, which devastated the areas of both cut-over and yet uncut forests.
3. The spread of disease among the trees, through fungi, viruses and bacteria, partly through their dispersal by insects in the open spaces created in the forest, and partly through the introduction of exotic organisms (such as Chestnut Blight).
4. An alteration of the plant and wildlife population dependent on the forest, causing some species to multiply and become a nuisance, others to decline and become extinct.

When the Royal Commission of 1893 published its *Report on Forest Reservation and National Park*, it prefaced its second part with an unusual poem lamenting the hideous wastage of the past century. The author of this poem may well have been Alexander Kirkwood, one of the pioneers of Algonquin Park and himself the Chairman of the Commission. Anticipating the fantasies of George Orwell, the poet looks forward to a time when Ontario has no more forests:

The forest trees that in the olden time –
 The people's glory and the poet's pride –
 Tempered the air and guarded well the earth
 And, under spreading boughs, for ages kept
 Great reservoirs to hold the snow and rain,

From which the moisture through the teeming year
 Flowed equably but freely – all were gone . . .
 Their precious bales exchanged for petty cash,
 The cash that melted and had left no sign;
 The logger and the lumbermen were dead;
 The axe had rusted out for lack of use;
 But all the endless evil they had done
 Was manifested in the desert waste.

Dead springs no longer sparkled in the sun;
 Lost and forgotten brooks no longer laughed;
 Deserted mills mourned all their moveless wheels.
 The snow no longer covered, as with wool,
 Mountain and plain, but buried starving flocks
 In Arctic drifts; in rivers and canals
 The vessels rotted idly in the mud
 Until the spring flood buried all their bones.
 Great cities that had thriven marv'lously
 Before their source of thrift was swept away
 Faded and perished, as a plant will die
 With water banished from its roots and leaves;
 And men sate starving in their treeless waste
 Beside their treeless farms and empty marts,
 And wondered at the ways of Providence.¹⁵

The reaction against early nineteenth century waste of nature's resources had begun soon after the publication of Darwin's *Origin of Species* in 1859. This provided the basis of a fresh approach to the science of biology, and ushered in a new era whose watchword was 'conservation'. At first, conservation meant putting a stop to wasteful and destructive practices, and preserving what was left of man's natural environment. Gradually, however, this somewhat static idea gave place to a more dynamic conception.

Man, says Dr. R. E. Balch, "is a special kind of animal with a great capacity for modifying his environment. Conservation means using this capacity wisely, recognizing that man has to co-exist with nature rather than make war on her."¹⁶ It is not enough merely to conserve the primaeval forest, which is what nature produces when left alone for some hundreds of years. The biologically mature natural forest is largely a forest of old trees, that need to be replaced by fresh growth, if they are to produce more wood useful to man.

This was recognized as early as 1883, when Dr. A. Eby of Sebringville, Ontario, in a paper to the American Forestry Congress at St. Paul, Minnesota, outlined the duties of the forester towards what remained of the *primaeval* forest:

The first point for the forester to consider in taking charge of a natural forest is how shall he restore it to a state of vigour, so as to attain a maximum increase of bulk each year. This can in a measure be done by removing all the mature trees and leaving only those that are young and vigorous. It can be done still better by removing all trees more than three or four inches in diameter, and even those of that size if they have been injured by the falling trees, or if they have been much stunted in their growth by overshadowing trees.¹⁷

Ten years later this advice had been broadened by the Royal Commission of 1893, which included in its statement of constructive policy the following aim:

To obtain from a forest the largest amount of product which it is capable of yielding without at the same time trenching on its capacity, calls for careful and scientific management, such as has hitherto been but little practised on this side of the Atlantic.¹⁸

This statement heralded the beginning of new developments in forestry and silviculture, which had as their object the maintenance of the production of wood in Ontario. The object was achieved; but as time passed on the connotation of the term ‘conservation’ widened yet further. The population increased faster than the demand for wood, causing greater emphasis to be laid upon the recreational aspect of the forest. The “scientific management” foreseen by the Royal Commission of 1893 was limited largely to the regeneration of the forest on areas that had already been cut over. Today, it has been greatly widened to include the protection and regulation of game and fish, the preservation of scenery and solitude, and the provision of facilities for sport and outdoor life, as well as the prevention of forest fires and the pollution of waters – all things unimaginable 150 years ago.

A factor that made it possible for the *primaeval* forest to undergo this transfiguration without complete disaster was that the ownership of the soil remained throughout vested in the Crown. Except

for purposes of settlement, the land was not, as in the U.S.A. and Nova Scotia, alienated to private interests. Therefore the human community which invaded Ontario was able, after a century and a half of grievous trial and error, successfully to graft itself on the remains of the primitive forest environment.

This is what makes the history of the Crown Lands Commission, and its successor the Department of Lands and Forests, which acted throughout as the agent of the community, so vital and meaningful to the people of Ontario.

2

THE SETTLEMENT OF THE LAND



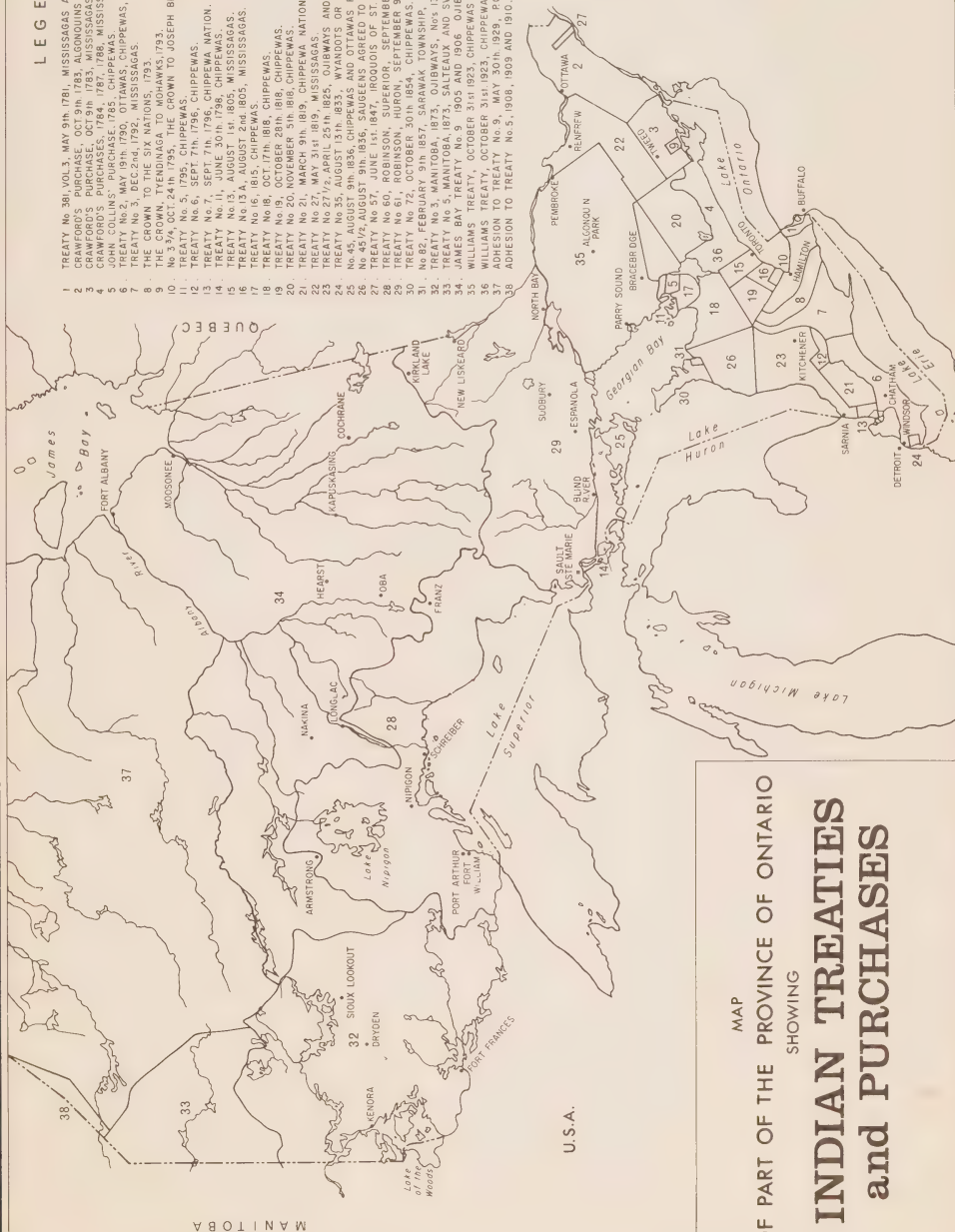
Before the Conquest, the only permanent settlements in what is now the Province of Ontario were a few trading posts and forts established along the main waterways. These included the Hudson's Bay Company forts on the shores of the Bay; the North-Western Company forts along the Ottawa River and Lake Superior; and the French forts at key points along the Great Lakes. After the fall of Quebec, the French forts were taken over by British garrisons, or abandoned.

The first twenty years of British rule made little impact on the forest. The Government was loath to disturb the Indians, and Governor Murray's 1763 Proclamation inviting settlers from Britain and her other colonies to come to Quebec was blunted by British

LEGEND

- [illegible]

U.S.A.



MAP
OF PART OF THE PROVINCE OF ONTARIO
SHOWING
INDIAN TREATIES
and PURCHASES

recognition of the French systems of land tenure (1771) and civil law (1774).

This do-nothing policy ended when the tide began to turn against Britain in the War of American Independence. British and German troops retreating westward across the Niagara River after the fall of Saratoga, camped with their Indian allies under the shelter of Fort Niagara and began to till the ground around it. To regularise this activity, Governor Frederick Haldimand negotiated with the Mississauga Indians a treaty for the outright cession to Britain of a strip of land along the Niagara River. This treaty was the first of a long series of similar treaties which by 1841 conveyed most of the land of South-Western Ontario from Indian into British hands.

In 1783 the British Government was called upon to provide shelter and sustenance for thousands of "United Empire Loyalists" – American Tories who had remained loyal to the Crown, and been forced by the War into exile. With them to be cared for were the British officers and men, German mercenaries, and Iroquois allies who had fought the long campaign against the American 'rebels'.

Governor Haldimand met this emergency by settling the Loyalists on the shores of Lakes Erie and Ontario, and along the banks of the St. Lawrence. By the time he left the Province in 1784, he had settled over six-thousand civilian refugees¹ and soldiers on free grants of land – a hundred acres for each head of a family or private soldier, fifty acres for each dependent, fifty for each single man, two hundred for each non-commissioned officer, and from five hundred to one thousand acres for each commissioned officer according to rank.² The Government bore all the cost of surveying and granting the lands, and of initially feeding and equipping the settlers. After one year's occupation of his land, each settler became entitled to a permanent deed, or 'patent', of ownership. The loyal Six Nations Indians were given a large reservation of land on the Grand River.

Before long the Loyalists expressed views of their own about the conditions of their settlement. They declared their dislike of French law and land tenure and petitioned the Crown to allow them to enjoy British law and customs. As a result, the British Government amended the Quebec Act to meet the settlers' grievances and remove the danger of their ultimate absorption by their American neighbours. The English system of freehold land tenure was intro-

duced in the lands ceded by the Indians; and the surveyed area of southern Ontario, along the shores of Lakes Erie and Ontario, was divided into districts each of which was provided with a lawcourt and judges of the English type. The original land grants to settlers were now doubled and those to officers standardized at a higher level of from two to five thousand acres. Surveyors began laying out townships (measuring nine by twelve miles on the waterfront and ten miles square inland), and dividing them into lots and concessions. Machinery was created to recommend further land grants; and a registry of Loyalists and their descendants set up to safeguard their privileges.

In 1791 the British Parliament passed the Constitutional Act, dividing the old Province of Quebec into two, Upper and Lower Canada, and providing each with its own lieutenant-governor, nominated legislative council and elected house of assembly. Henceforth all land in Upper Canada was to be granted in freehold; but one-seventh was to be set aside for the use of the Crown, and another one-seventh for the support of the Protestant (i.e. Anglican) clergy. The Crown also reserved to itself all precious minerals (later defined as gold and silver) on the land, as well as all timber suitable for ship-building.

The first Lieutenant Governor of Upper Canada, Colonel John Graves Simcoe, was a zealous and energetic promoter of land settlement. He found himself in a difficult position, having to follow a line of policy laid down from London, three thousand miles away, and yet adapt that policy to practical needs on the spot and obtain quick results at the lowest possible cost. His main aim was to populate the new Province as far as possible with settlers of the right type. He was determined at all costs to preserve British traditions and institutions, and to keep the Province free of subversive republican influences from across the border. However, the outbreak of the War with France was reducing to a minimum the flow of emigrants from Britain herself. Therefore there was no reason to refuse entry to settlers from the United States, particularly those who, Simcoe believed, remained at heart attached to British institutions.

Of necessity, Simcoe's attitude was paternalistic and arbitrary.³ He scrutinised closely the antecedents and character of new applicants for land, and made free grants to those who seemed most

likely to reside permanently on their lots. He and his successors also gave larger grants to those who appeared best able to cultivate them.

The maximum grant that any one person might get normally was twelve hundred acres; but there were various ways in which this limit might be exceeded. Some of these ways were purely a matter of business. For example, a number of land-entrepreneurs were encouraged, either individually or collectively, to bring settlers into Upper Canada on their own initiative, in return for additional grants to themselves. The most successful of these was Thomas Talbot, who in thirty-five years placed over thirty thousand settlers on three hundred thousand acres in the Western District, securing in return twenty thousand acres for himself. A different type of enterprise, almost as successful, was the undertaking by the Canada Company, a group of London capitalists in the 1820's, to buy from the Government of Upper Canada and settle with emigrants from Britain, three million acres of land to the east of Lake Huron, known as the Huron Tract.

Besides these business transactions, there were other grants that were more a matter of privilege. The bounties extended to United Empire Loyalists were gradually increased by making grants to their posterity, and even to their relatives migrating from the United States, without too close insistence on the cultivation and improvement of the lands already granted. The main influx of Loyalists took place between 1783 and 1797, after which time it dwindled to a trickle of claims from relative of Loyalists and others who had bought up their claims.

Furthermore, from the earliest days, high-ranking military personnel had always been considered as entitled to larger grants of land than the ordinary civilian settler. Their numbers were, from time to time, enlarged by the inclusion of militia-men and regular British troops who had served in the War of 1812 and elsewhere. Gradually the same privileges came to be extended to senior officials of the Government of Upper Canada, partly because they (like the soldiers) were supposed to make the most desirable type of settlers, and partly to compensate them for the comparative smallness of their salaries. These officials included not only members of the Governor's executive and legislative councils, judges, lawyers and other leading citizens – but also persons employed by the Gov-

ernment, such as contractors and surveyors, who were paid for their work in land instead of cash.

For example, Chief Justice William Powell, with his wife and seven children, received grants totalling twelve thousand eight hundred acres.⁴ His successor received six thousand acres. Even the Surveyor-General of Upper Canada, Lieutenant David William Smith, who was responsible for all surveys and reports on petitions for land, was included among these large grantees.

Inevitably, this practice of making extra large grants to deserving persons tended to harden into a system of favoritism on a grand scale towards three main classes – Loyalists, ex-service men and Government officials. They were regarded by Simcoe and his successors as likely, on account of their attachment to the Crown and the Anglican Church, to form a natural aristocracy that would give stability and leadership to the young and growing community.

Before long, however, the notion that the favoured classes would make exceptionally good settlers was found to be untrue. Many Loyalists turned out to be good farmers; but others did not. They regarded their grants of land as free gifts, bestowed on them as a reward for past service. After completing their original year of occupation, they felt under no further obligation to improve their land, which they were ready to turn into cash at the first opportunity. The same was true of the military claimants; they did not as a rule make good pioneer farmers. It would have been cheaper in the long run for the state to have given them pensions, rather than land. Public officials were in the same category. Had they been paid adequate salaries, it would not have been necessary to give them these 'family allowances' in land, which they intended, not to cultivate, but to sell.

By granting so much land free, also, the Government deprived itself of a possible source of revenue from land sales and encouraged speculators to buy up the granted lands and keep them in a 'wild' state, hoping for a rise in prices. But in effect the Government itself was the largest of all land speculators, since it kept the Crown reserves off the market, in the expectation that they too would become more valuable.

The system of favoritism naturally bore hard on new settlers who came in, unprivileged, from outside the country. At the outset, non-Loyalist emigrants from the United States found they had to

encounter considerable prejudice among the original Loyalists. Many of them were Methodists, unpopular with their Anglican neighbours. Others belonged to strange sects – Moravians, Quakers or Mennonites – who were unwilling to bear arms. Consequently, American immigrants tended to be suspected, sometimes justly, of disloyalty during the War of 1812; and afterwards attempts were made to classify them as ‘aliens’ and deny them full rights as citizens. It took several years of controversy before a tolerable compromise could be worked out.

At last, after the end of the Napoleonic Wars, the authorities began to turn towards Britain, as a possible source of emigrants likely to be more loyal than the ex-Americans. Almost at once, a tide of Britons began to flow across the Atlantic to Canada, in ever-increasing numbers – some with assistance from the British Government or private agencies, others independently. The average new settler received his hundred acres of surveyed land free,⁵ but from 1818 onwards with the proviso that he must build a house sixteen by twenty feet in size, clear and fence at least five acres, and clear half of the roadway in front of his lot, within a stated period, usually three years. When these duties had been certified as performed, he became entitled to a patent of ownership. At various stages he had to pay fees to a number of officials, on a scale that was always being revised upwards; also he found that the issue of patents was a slow and uncertain process.

It was often difficult for the settler to get the exact lot of land that he wanted. People residing in Toronto naturally had advantages in getting access to the Surveyor-General’s office and influence there; while settlers in remote and thinly populated districts were at a corresponding disadvantage.⁶ They had to take what land was available and put up with the dangers of inaccurate surveys and long delays in getting the necessary formalities of land ownership completed. It was specially irksome to the British immigrant to find that the privileged groups built up through the earlier free grants had hardened into a closely-knit circle of families and friends (‘the family compact’) that monopolised the public offices and the patronage of public works and most other important jobs in the community. Both political and social power were concentrated in the hands of the Governor’s executive and legislative councils, against which a rising surge of discontent gradually found its voice in the elected Assembly.

The chief focus of discontent was the land system. A report made by the Surveyor-General in 1826 showed that down to 1824 eight million acres of land had been granted to individuals, of which the privileged groups – Loyalists, military and officials – had received the lion's share.⁷ Less than a million and a quarter acres had gone to regular settlers, and only about half a million acres were being cultivated, while five million acres were being held for speculative purposes.

The new settlements that had grown up along the Great Lakes and the River St. Lawrence and were beginning to extend into the interior, were thinly dispersed and backward; they lacked communications, public works and educational facilities. The main obstacle to their progress was the enormous area of unused land lying locked up in the hands of speculators or in the Crown and Clergy Reserves, which amounted to some three million acres.

These reserves had originally been distributed uniformly in blocks across the surveyed townships, under the mistaken notion that this would make it easier to raise a militia for the defence of the Province against invasion.⁸ But as the danger of invasion receded and disappeared, the reserves appeared as mere isolated enclaves of land, serving only to cut the settlers off from each other, make road building and maintenance more difficult, and encourage squatters and poachers. The Reserves then stood out as islands of reaction, privilege and (in the case of the Clergy Reserves) sectarianism.

Although the tide of emigration was not only swelling, but bringing to Canada a more self-supporting type of settler, an ever-increasing proportion of the newcomers were being diverted by their experiences into the United States, where land could be bought outright without formality or favouritism. In the Provincial Assembly reformers were demanding that the Clergy Reserves should be liquidated, that the American system of land sales be introduced, and that the elected representatives of the people should be given more control over the public revenue from natural resources, such as land and timber. While rejecting these demands, both the home Government in London and successive lieutenant-governors of the Province gradually became convinced that the original policy of land settlement by free grants was a mistake that had to be rectified.

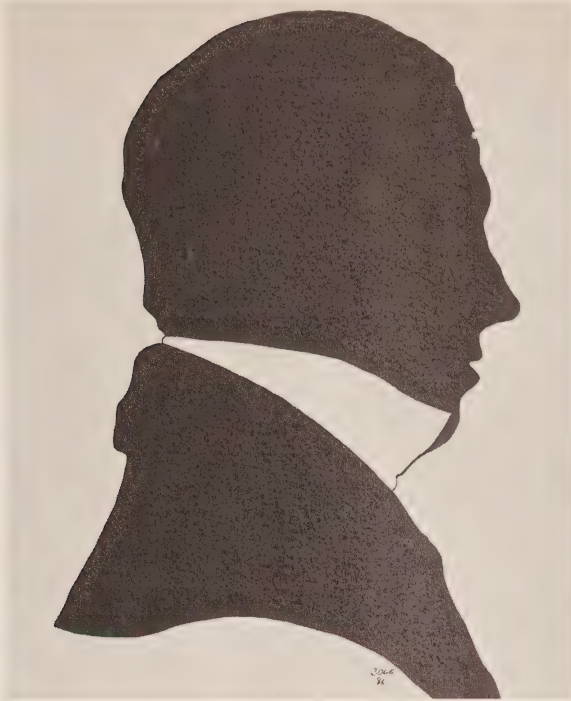
During the 1820's, the Colonial Office came under the influence of the reformer, Edward Gibbon Wakefield, whose ideas of colonisation were being tested in New South Wales.⁹ Under what was

called "the New South Wales system", public land, instead of being given away, was to be sold outright to settlers who possessed enough capital to develop their holdings. The proceeds of the sales would be used as an emigration fund to bring over the poorer class of settlers and find them employment as labourers on public works or private farms, until they could save enough money to buy their own land.

Instructions on carrying out Wakefield's ideas now began to go from London to the Governors of Upper Canada, some of whom, notably Sir Peregrine Maitland whose tenure of office lasted ten years, were already trying to introduce land reforms. Maitland insisted on stricter performance of settlement duties, imposed a tax on all wild lands, and began attempts to dispose of the remaining surveyed Crown Lands by selling them at auction to the public. To implement the Wakefield policy, in 1827 the Home Government gave instructions that a new office was to be created, that of Commissioner of Crown Lands; and, later in the same year, Peter Robinson, an elected member of the Legislature who had successfully brought over to Canada several parties of Irish immigrants and settled them near Peterborough (so-called after him), was appointed to the position.

Robinson belonged to the "family compact" circle and found it far from easy to liquidate the old policy of free grants and the old methods of favouritism. In addition, he was handicapped by having to combine his office with another onerous post – that of Surveyor General of Woods and Forests – where extensive reforms in timber administration were also being called for. In less than ten years' time, the double administrative burden proved too much for him.

Emigrants from Britain were coming in faster than ever; between 1830 and 1833, the population of Upper Canada increased by fifty per cent. To prevent the poorer settlers from migrating southward across the border, the system of free grants had to be continued in a modified form, by granting fifty acres free to each indigent applicant. Other available public land was put up for auction, but proved hard to sell in competition with the lands offered by the Canada Company and from the Clergy Reserves. To attract purchasers, the advice of the Colonial Office was disregarded, and settlers were allowed to put down a ten per-cent deposit and pay off the balance of the price by instalments (known as 'quit rents') spread over a



Silhouette portrait of HON. PETER ROBINSON, first Commissioner of Crown Lands (1827) and Surveyor General of Forests for Upper Canada.

term of twenty years.¹⁰ This had the effect of creating a long-term credit system, with the Government placed in the position of chief creditor. To the difficulty of enforcing settlement duties on the former recipients of free land grants, was now added the difficulty of collecting instalment dues from the new owners. Many of these had bought their land without possessing the necessary capital or the previous training and experience needed to farm successfully. Rather than suffer the forfeiture of their land to the Government, they succumbed to the temptation to sell it to speculators or even to strip it of its timber and then abandon it. In this confused situation, there was a steady increase in the number of squatters who occupied public and 'wild' lands without any title of ownership at all.

A Scottish farmer who toured Canada in 1835 voiced an impres-

sion, which was shared by other observers, of the general stagnation then prevailing in Ontario. "For eight or nine miles", he wrote, "the shores of Lake Erie resembled the beach of the sea. The country at some distance was wet and partly newly cleared. . . . Houses were mean; the inhabitants ragged and dirty. Cattle were small and lean. Many pigs were pictures of starvation. . . . First crops on small clearings were half suffocated for want of air. . . . At present I regard Upper Canada as a wretched, an immoral and a misgoverned country."¹¹

Meanwhile the mounting discontent was finding political expression in the Reform agitation led by William Lyon Mackenzie. In his famous Seventh Report on Grievances, published by the House of Assembly in 1835, Mackenzie denounced "the almost unlimited extent of the patronage of the Crown, or rather of the Colonial Minister for the time being and his advisers, together with the abuse of that patronage." The Report lumped together among these abuses the management of the public lands, the control of public money raised by local taxation, and the Government's influence over the Canada Land Company, the Bank of Upper Canada and the Welland Canal. Altogether, it concluded, the Province was riddled with abuses, "concealed, palliated, excused and sustained by those who are interested to uphold them as a means of retaining office for their private, and not for the public good." The abuses could only be ended by making sweeping constitutional reforms, which would limit the Lieutenant-Governor's power of patronage and make his executive and legislative councils responsible to the elected Assembly.

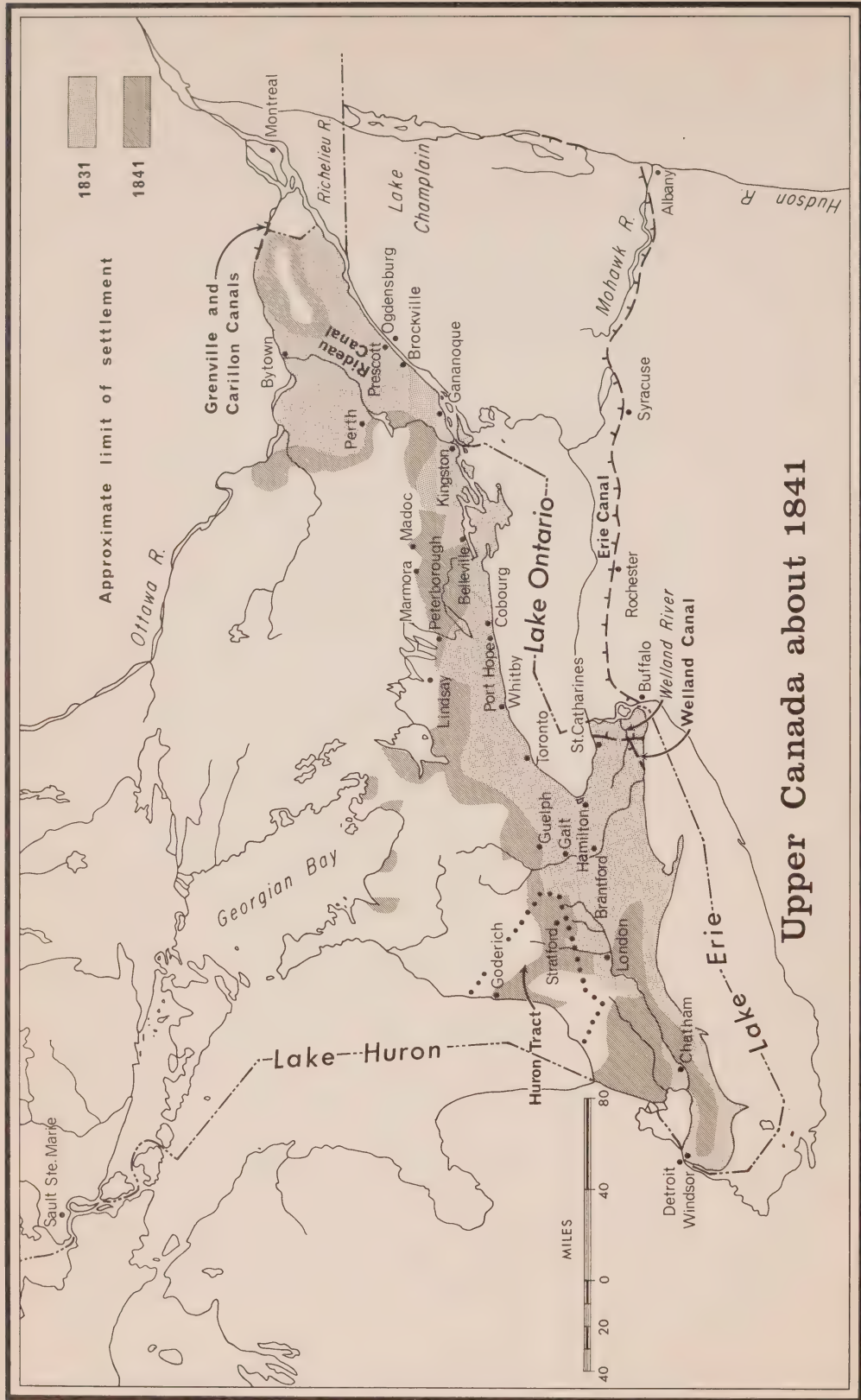
Mackenzie's programme of grievances had a boomerang effect on the party he led. It goaded the leaders of the "family compact" into making a powerful counter-attack. In 1835 they found an ally in the new Lieutenant-Governor, Sir Francis Bond Head, who dissolved the Assembly and put himself at the head of the Conservative campaign against the reformers in the election of 1836. By appealing to newly arrived British immigrants to help him save the British Constitution from Republican extremists, he secured the rout of the reformers and the election of a harmonious Conservative Assembly. However, political bitterness was sharpened by charges made against Head that he had bestowed land patents illegally, in order to create new voters to influence the Assembly election.¹²

During the very year of the election, Canada began to feel the effects of a business slump and financial crisis in Britain and the United States. Immigration slackened, a succession of bad harvests occurred, public works declined and unemployment among new settlers rose. All these factors helped to rouse to frenzy the frustrated reformers who had been agitating so fiercely for responsible government and an end to the rule of the "family compact". They broke out in the ill-starred Rebellion of 1837, which had its more fortunate aftermath in Lord Durham's subsequent mission and famous Report.

Even before the Durham Report, the royal assent was given to an important new piece of legislation passed by the Assembly in 1837.¹³ The Public Lands Act of that year decreed that, after the satisfaction of existing free and privileged grants, all the remaining Crown Lands were to be sold at public auction at an upset price fixed by the Governor. The management of all such sales was to be in the hands of the Commissioner of Crown Lands, acting through a resident agent in each district, who was made responsible for collecting the cash payments. Lands which remained unsold were to be disposed of by private sale to any willing purchasers. Extra allotments of fifty acres were to be reserved alongside each lot sold, to be granted to the purchaser within ten years, or as soon as he had fulfilled his settlement duties.

This Land Act of 1837 continued in force for the next seven years, subject only to the criticism that it invested the executive government with too much discretionary power to sell lands privately and reserve the extra grants. But these objections lost their force after the Durham Report had turned the course of the country's political evolution in the direction of responsible government, as the reformers had so long demanded.

The Report itself dealt scathingly and in detail with the faults of the older system of free land grants. "The Province of Upper Canada," it declared, "appears to have been considered by the Government as a land fund to reward meritorious servants. . . . The Government, by the profuse grants it has made or sanctioned, has closed against its own subjects by far the largest portion of this valuable colony."¹⁴ Altogether nearly one half of all the surveyed lands in the Province of Upper Canada had been given away to privileged persons. But less than one tenth of the land so granted had been



Upper Canada about 1841

even occupied, much less reclaimed and cultivated, by settlers. Between 1763 and 1824 the population of the Province had grown to a hundred and fifty thousand, while the quantity of land granted or promised was over thirteen million acres. Then, between 1825 and 1838 the population had more than doubled, to reach four hundred thousand; but for the additional two hundred and fifty thousand people only six hundred thousand more acres had been made available. Was it to be wondered at that more than half the number of immigrants into Upper Canada since 1829 had afterwards moved into the United States?

Besides this general condemnation of the policy of making free grants of land, the Report also severely criticised the way in which that policy had been administered through the offices of the Surveyor-General and the Commissioner of Crown Lands. Over one quarter of all the surveyed lands in Upper Canada had somehow passed out of the Crown's control without being accounted for. This was possibly due to “the practice of putting fictitious names to favourable locations upon the diagram of a township in the Surveyor-General's office”, to reserve them in favour of people who might have some claim on the Department's favour. In addition, the Report convicted the same Department of responsibility for numerous erroneous surveys, serious delays in the issue of grants and patents, and gross irregularities of procedure, all attributable to “an establishment inadequate at best, and for the last nine years under no efficient and responsible direction.”¹⁵

To remedy this unhappy situation, the Report proposed to take the administration of the public lands right out of local hands and place it under a central imperial authority, or “Colonial Commission” in London. There it could be conducted in strict accordance with Wakefield's colonisation principles. All Crown land would be sold at a uniform, fair price, low enough to encourage any purchaser who had the means of improving it, and high enough not to tempt those who lacked such means. The method of payment by instalments should be abolished, and the whole proceeds of purchase should be applied to carrying out public works. There should be no more reserved land; surveys should be regular and accurate; and delays in issuing titles of ownership be done away with. The same Commission should regulate the disposal of Crown timber, organise and assist emigration.

This feature of Lord Durham's recommendations proved impossible to implement, for constitutional reasons. In 1840 the last Lieutenant Governor of Upper Canada, Colonel Arthur, was indeed notified that a Board of Commissioners was being set up in London, to promote emigration and manage all sales of public land in the Colonies. But then it was found that in Upper Canada, as in some other North American colonies, the sale and management of waste lands was since 1837 legally a function of the provincial authority alone, and was therefore outside of any interference by the Crown.¹⁶

There were thus left for adoption by the Imperial Government the main recommendations of the Report – that Upper and Lower Canada should be united into one province; and that the principle of responsible government should be introduced into the workings of the local parliamentary system. Even this was only done gradually, by executive action under a series of enlightened governors-general, spread over a term of years. But now at last the people of Upper and Lower Canada were given a chance to set their own house in order, and bring about, under their own civil servants, a more honest and orderly, if slower, settlement of the land.

3

THE EARLY TIMBER TRADE



Early in the nineteenth century, Britain began to run short of the timber she needed to build and repair the ships of the Royal Navy. Cut off by Napoleon from her traditional source of supply, the Baltic countries of Northern Europe, she turned to the “illimitable” and “inexhaustible” forests of Canada.

Twice before the Napoleonic Wars, in 1763 and 1775, the British Government expressed interest in Canada’s timber resources, instructing the Governors of Quebec to secure all existing stands of Canadian oak (for hulls) and pine (for masts) for the exclusive use of the Navy. They were also ordered to survey, set aside and protect all forest areas suited to the growing of these species, for the purpose of ensuring a perpetual supply of timber in the future.¹

Had this policy – implying the segregation of land uses and the conservation of natural resources – been strictly followed, much trouble in the subsequent history of both agriculture and the timber industry in Ontario and Quebec might have been avoided. In fact, the British Government did try to put the policy into effect. John Wentworth, Governor of Nova Scotia, was appointed Surveyor-General of Woods for Nova Scotia and all the North American territories and he in turn appointed a deputy in Upper Canada.² The Deputy Surveyor was instructed to declare lands bearing timber suitable for the use of the Navy “reserved”, or withheld from settlement until the wood had been cut by contractors commissioned to supply the Royal Dockyards.

Several reasons can be given to show why this official made virtually no timber reservations in southern Ontario.³ First, before the steamboat and the railway the cost of moving timber across Lake Ontario and down the St. Lawrence rapids was prohibitive. Second, the area was dominated by the process of settlement. The settlers were not interested in preserving stands of timber which could not be used in the foreseeable future and which were interfering with land speculation and actual settlement. The only important export that the early settlers derived from their forests was potash, a commodity derived from burning the trees. Third, the men appointed as deputy surveyors of woods counted the position amongst the least important of their many offices. The few records they have left are more concerned with releasing certain townships from any Crown claim than with trying to establish the policy outlined in the Governor’s instructions.⁴ Fourth, as long as adequate supplies of timber still existed elsewhere in British North America it was easy enough for the administrators of Upper Canada to neglect their instructions.

Lumbering in southern Ontario, prior to the 1830’s, was confined to small operations serving local sawmills. No one, from the Governor and Deputy Surveyor of Woods down to the squatter-farmer, was seriously interested in the valuable resource which was being destroyed in the interests of settlement. Elsewhere in the Province, however, the timber trade was rapidly gaining momentum. Encouraged by the protective tariffs which a succession of war-time (1793-1815) British Chancellors of the Exchequer had devised to divert English timber buyers from the vulnerable European

market, the Ottawa timber trade grew steadily in importance from its inception in 1806.⁵ As it expanded, the British policy for exploiting the North American timber lands proved less and less capable of controlling a burgeoning and difficult-to-regulate industry.

According to the theory propounded by the British Government a select number of contractors supplying the Royal Dockyards were commissioned to cut the timber on the reserves of British North America. These contractors in turn transferred their rights to Canadian lumbermen or commissioned Quebec merchants to buy timber brought to the Lower Canadian port.⁶

The system would probably have worked well enough had not the middlemen who shipped timber for the Navy found that, because of the general scarcity and high price of wood in Britain, there was a growing civilian demand for the product. They began to ship more and more timber from Quebec and diverted an increasing proportion to meet civilian needs. Local lumbermen found the regulations restrictive. They had either to cut on forest reserves under license from the British contractor or else had to follow Philemon Wright's example and obtain a grant of land from the colonial government. When these means of acquiring forest lands failed, the lumberman was forced to acquire cutting rights from settlers or trespass on Crown lands.

It was some years before the unwieldy nature of this system troubled the administrators of Upper Canada, since the operators on the Ottawa developed the Quebec side of the river first. In 1826, however, Governor Maitland issued a proclamation which acknowledged that "abuses" had occurred in the Ottawa trade and provided that all who wished to do so might cut timber in the Ottawa territory, as long as their operations did not interfere with those of lumbermen who had already been given permission to cut in certain areas and as long as dues were paid according to a newly-established rate.⁷

A year later the Treasury Commissioners appointed Peter Robinson, Commissioner of Crown Lands, as Surveyor-General of Woods and Forests and directed him to make a survey of the colony's woods and forests to discover where timber for the Navy's masts might be found and what other types of timber were available in the districts. He was also to describe all timber reservations included in grants and patents, though his instructions recognized that much of

it would not be useful to the Navy and consequently could be cut by commercial operators.⁸

From his new office Robinson surveyed a rapidly expanding industry. In 1803 Great Britain, Canada's only significant export market, had imported only 10,113 loads (each load equal to fifty cubic feet) of square timber from her colonies in British North America, and 286,987 loads from European countries.⁹ Three years later the enterprising and resourceful Philemon Wright with Yankee flair and ingenuity floated his first raft of timber to Quebec, braving the perils of rocks, shoals and rapids on the way. The success of his risky venture marked the beginning of the Ottawa timber trade. In 1811, five years after Wright's voyage, Britain imported more timber from British North America than she did from the Baltic. After a setback during the War of 1812, the colonies again took the lead, and by 1820 the figures showed 275,644 loads of square timber from the colonies and only 65,486 from Europe and elsewhere.¹⁰

Despite the assistance of the Napoleonic Wars and the preferential tariff, the colonies' dominant position had not been achieved easily. For many years it was believed that Canadian timber was more liable to rot than Baltic. It took several decades for the British builder to correct this false belief by observing the comparative performance of the timbers. During that time numerous buyers preferred to pay higher duties and obtain the "sounder" product.¹¹ Meanwhile, to improve the reputation of Canadian timber, the Legislature of Lower Canada in 1808 passed legislation to regulate and standardize the quality and measure of all exported timber.¹² Under this legislation the Government appointed "cullers" to inspect, measure and classify all the timber shipped down the St. Lawrence to Quebec. Timber found up to standard was marked with the letter "M", meaning merchantable. Other inferior timber, however, could also be exported provided it was clearly marked as sub-standard. Trees of all sorts, if cut up into short lengths of from twelve to sixteen feet, were classified as "saw logs". They could be exported to be sawn up into planks of various thicknesses. But the more important exports were the "square timbers", great logs usually of oak or pine cut into lengths of at least twenty feet, stripped of bark and branches and cut flat on four equal sides, each measuring not less than twelve inches across.

In 1819 the system was further improved, when it was enacted



PHILEMON WRIGHT'S Mill on the Chaudière, c.1820

that all cullers and measurers had to pass an examination before a Government-appointed board.¹³ At the same time a more detailed specification of the defects considered to disqualify timber as merchantable was drawn up and applied to a wider range of timber than previously. Such regulations provided but crude standards by which the British buyer could assess the value of the timber he was purchasing, but they did much to raise the reputation of the Canadian industry. Without them the Canadians might have found it difficult to compete with European timber as Britain reduced the preferential tariff.

The period from 1793 to 1826 in Upper Canada was a pioneering time when the industry was slowly outgrowing primitive methods of organization and financing and taking steps to create the first rough standards needed to ensure the acceptance of its products in Britain.¹⁴ Peter Robinson took office at a moment when this pioneering stage was drawing to a close. New needs were about to spring up south of the border which would bring about radical changes in the Canadian industry and fashion the lumbering community North America would know for nearly a hundred years. It was Peter Robinson's fate to fumble his way through the first few years of this transition.

On the surface Robinson's instructions were straightforward enough. He was, as has been mentioned, to survey the forest resources of the colony and to ensure that reservations of timber were included, where necessary, in land grants and patents. Each year he was to report to the Governor stating where he believed timber licences should be granted for commercial purposes and specifying the quantities which might be cut in each district. If the Governor approved his recommendations the licences, each for a quantity of not more than 2,000 feet, were to be disposed of by public auction. A list of basic, or "upset", prices was given to Robinson and he was to insist that the timber be cut within nine months of the date when the licence was issued; otherwise it would be void. The lumberman had a little longer – fifteen months – to pay for the timber itself. Finally, timber measurers were to be appointed in each district to certify the quantity of the cut.

To the officials in London, this scheme must have seemed simple and effective. To Peter Robinson its authors must have seemed grossly ignorant. It was all very well to make an elaborate forest survey in England or Wales, but in Canada the sheer distance in-

volved and the number of men required to make such a survey doomed it to failure from the start. Robinson did not attempt the impossible; nor did anyone else until, a century later, the coming of the aeroplane and the aerial photograph made this type of forest inventory a feasible proposition. Again, Robinson was faced with the problem of establishing a licensing system. True, licences had been issued in the past, but only by the British Government to British contractors who in turn delegated to Canadians the cutting of the timber. Others had cut on Crown and private lands apparently without obtaining licences at all. Furthermore, the Proclamation of 1826 had stated that, for the time being, anyone could cut on Crown lands without licence. Thus Robinson not only had to create a licensing system, but also to convince the lumbermen that they must now pay for what they had previously taken freely.

With these great difficulties facing him, it was not surprising that London's other suggestion must have appeared utterly absurd. How could he prescribe the size of the cut, still less hold auctions and get upset prices for the timber when he had no idea what kind of wood was growing where, or in what quantity? Certainly he could insist that payments be made on time; but as for appointing two measurers in each district, how were two men to check the greed of the lumbermen and their timber gangs in that independent age? Furthermore, did not London know that a Canadian district covered an immense area in which travel was often difficult? Many more than two men would be needed to patrol these forests.

To understand why Robinson's instructions seemed so impracticable, it is worthwhile, at this point, to examine briefly how the lumberman and his crew operated in the bush.

When the timberman had obtained his lease, he would lead his lumberjacks into the forest, find the limits assigned to him (usually situated within five miles of a river), make a road through the bush, build a camp and get down to cutting. He housed his men in log shanties, each with a 'camboose' or central fireplace, where the meals were cooked. Above the fireplace a great hole was left in the roof of the shanty, to serve as a chimney. The camboose kept the lumberjacks in excellent health during the long winters. For food there was . . .

. blackstrap molasses, squaw buns as hard as rock,
Tea that's boiled in an old tin pail and smells just like your sock.
The beans they are sour, and the porridge thick as dough.



A camboose camp

But there could be feast-days, as another popular ballad, "The Chapeau Boys", reminds us:

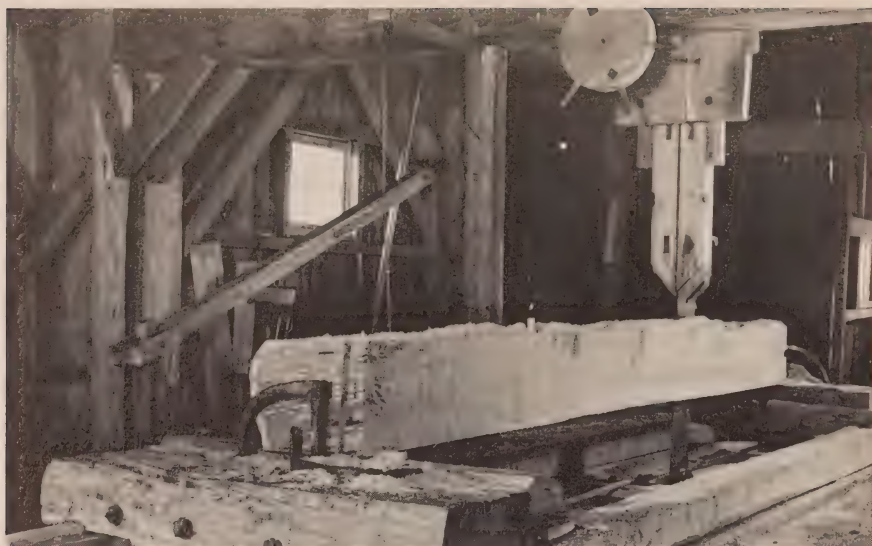
We had cookies, rice pudding, our tea sweet and strong,
And good early onions full six inches long.
We had cabbage, cucumbers boiled, pickled and raw,
And the leg of a beaver Bob stole from a squaw.¹⁵

For felling square timber six men, with their specialized skills, made a good working party. They included the fitter, who selected the trees for their length and soundness; the faller, who used his axe to make the trees fall in the right direction; the log-maker, who cut off the top and trimmed the branches; the scorer, who peeled the bark and notched each side of the log with the axe, at intervals along a stretched cord; and the hewer, who with his broadaxe trimmed the sides of the log to make it square.

As a rule, the timber gang went through the limit first, and selected and cut down the trees suitable for square timber. In one day they could expect to 'make' about six pieces of square timber, measuring some 400 cubic feet. They were followed by a second gang of saw-log cutters, usually five in number – three to cut, top and trim the trees, and the other two to saw them into lengths. The average tree selected would make five logs, with a diameter of not less than fourteen inches. Fifteen such trees, or seventy-five logs, made a good day's work.¹⁶

All trees not up to standard, amounting to two-thirds of the whole, were left to rot in the forest, together with the slash, chips and sawdust from the cut timber. A Government order directing the logger to fell all trees, even though faulty, encouraged this cruel waste, which in fact provided inflammable material liable to be set on fire by lightning, or at a later date by sparks from engines.

Most timber-cutting was finished by Christmas, and the New Year was used to cutting trails and making roads for hauling out the timber in early spring. At that time horses or oxen would draw it to the nearest navigable stream, to be floated down to a main river or lake. This task, undertaken after the break-up of the ice in early May, was extremely arduous and dangerous. The rampaging streams, swollen by the melting snow, whirled the logs along at terrific, but changeable, speeds over dams, along slides and through chutes. The 'drivers' who accompanied the logs down to the Ottawa



Muley saw for cutting up square timber. At Upper Canada Village, near Morrisburg.



Hewing square timber

or St. Lawrence Rivers had to follow them day and night, and sometimes their luck turned against them, as it did to Johnny Doyle:

His foot it got caught in the jam,
And you know how those waters kept rolling
From the falls at the reservoir dam.

We rode it down to dead water,
The sweat down our bodies did pour;
When we pulled his dead body from under,
It looked like poor Johnny no more.

His flesh it was torn into ribbons,
Into pieces the size of your hand,
On earth his dead body lies resting;
May the Lord take his soul in command.¹⁵

On the major rivers the logs were taken over by the raftsmen, who had the duty of binding the sticks of timber together, side by side, with withes of birch or hazel, into 'drams' or floats. The drams – each containing 500 sticks – were protected by frames fastened together with wooden pins and cross-pieces. Usually the timbers were put on in three layers, with the oak timbers carefully interspersed among the more buoyant pines, so as to make sure the whole raft would float easily. Ten drams made up a large raft, worth some \$170,000.¹⁷

Navigating these rafts was an art that called for special skill and strength. The raftsmen, headed usually by an Iroquois or French Canadian, had to know how to take full advantage of wind and current; and when to hoist their primitive sails or to use their oars. It was a thrilling sight to watch one of these great rafts approaching and passing a stretch of rapids on the St. Lawrence. The timbers, captive yet flexible, would groan and grind together as they rose and fell on the surging waters, speeding along at a breakneck pace, and barely escaping being torn asunder by the rocks in their path. On the Ottawa and other large rivers big rafts proved too unwieldy. Here drams had to be replaced by smaller units, cribs, composed of a score or two timbers laid side by side and held together by a frame with traverses. A raft of cribs could be broken up into its constituent sections in order to pass over rapids and falls.



Breaking a log jam

If necessary, the crib itself could be taken to pieces, and the individual timbers sent through separately, or carried around on slides, and rebuilt afterwards.

With this picture of lumbering in mind it is not hard for us to imagine the type of man the lumberman was. He had to be tough to keep his men in order and to resist the attempts of other lumbermen to cut the timber he had acquired by licence. For the "limit" covered by a licence was by no means well defined and many a lumberman claimed another's area as his, and used his work gangs to back up his claim. Such disputes often led to bloodshed, particularly when a gang of Irishmen took on a crew of French Canadians.¹⁸ In the woods Government officials were few and consequently often preferred discretion to valour. Even when the lumberman came to town he found it convenient to bring with him his woods-learned truculence and use it in his dealings with the Gov-

ernment. In the woods he was a despot and he expected to have his own way in the Government's office as well.

As Peter Robinson pondered his instructions and tried to calculate how many clerks and assistants he could employ on a budget amounting to no more than "one-sixth part of the net amount which may . . . be paid . . . in respect of such licences", he must have felt profoundly frustrated. At the best of times, assuming that the amount of £3,134 received in 1828 was a good return,¹⁹ he could not afford to employ more than ten men. What a relief it would be to forget about this unknown and unpleasant chore and concentrate all his attention on his other job of being Commissioner of Crown Lands which was, after all, much more important. Besides, he knew more about Crown Lands. He had gained valuable experience from his establishment of an Irish settlement at the spot which now bears his name – Peterborough. Crown Lands might be complicated, since everyone concerned, from land speculators to struggling farmers, wanted special concessions, but Robinson had been raised in the atmosphere of the lands problem and knew what was involved. Timber regulation was another matter, transacted far away from the smug little town of York with its bustling bureaucracy and its intriguing political life.

Fortunately, a way of escape was open to Robinson. He had been notified of his appointment during a visit to England and on his return discovered that in 1825 Lord Dalhousie, Governor in Chief of the two Canadian colonies, had appointed a pioneer Ottawa lumber merchant, Robert Shireff, as Collector of Crown Timber dues for the lower province. Subsequently, Shireff's mandate had been extended, again on Dalhousie's recommendation, to collect dues for Upper Canada. Quite apart from the fact that it was not wise to offend the Governor in Chief, Peter Robinson may have found that the arrangements made by Robert Shireff were quite satisfactory, regardless of the fact that they bore no resemblance to the instructions Robinson had been given. Shireff was confirmed in his appointment and with the assistance of his father, Charles, continued his method of regulating the Ottawa timber trade.²⁰

Given the difficult nature of their task – a political system where policy was made erratically and seldom executed, faulty means of communications with the seat of government, and the need to regulate an unruly industry – the Shireffs probably devised a collection

and licensing system as effective as any that any other administrator in Britain or Canada was capable of concocting. They cannot be blamed entirely for the loss of £3,635 which occurred during their tenure of office nor perhaps for the fact that the licensing system did not bring the Crown as much money as it might have done.²¹ They had undertaken to establish and operate an arrangement that required more assistance than they were given.

Their scheme was as follows: lumbermen applied to their office at the Chaudière Falls, requesting a licence to cut timber and stating the proposed cut, which was usually far below the actual cut. A licence was issued and the lumberman paid the Collector a sum equal to 25 per cent of the timber dues payable on the proposed cut. He then entered into a bond with the Department for the remainder. During the summer the logs arrived at Bytown, were measured and the quantities recorded. On arrival at Quebec the timber was halted until the Crown dues were collected by Shireff who, once the timber had passed Bytown, followed it down river.

In course of time the lumbermen found that Shireff would accept, instead of the bond originally posted for a licence, a promissory note and bills endorsed by influential financial houses in Quebec and Montreal.²² This worked well, so a further innovation occurred: a reputable financial house was instructed to make the collections of timber dues at Quebec – in effect, to act as collector in place of the Shireffs. However, the financial house failed and the Shireffs then found themselves owing the Government nearly £4,000. It was most unfortunate for the Shireffs that the Commissioner of Crown Lands, on investigating this sad story, discovered that a certain amount of Crown money had found its way into the pockets of various Bytown builders and merchants who had been building extensive mills on the Ottawa for Robert Shireff.²³

When R. B. Sullivan, who succeeded Robinson in 1837, discovered the shortcomings in the Shireffs' management their plan had been in effect for twelve years. On the whole, he approved of their arrangements and, apart from replacing the Shireffs with a more trustworthy official, he confined himself to making improvements in the method used by the Collector to transmit his receipts to the Crown Lands office at York. He also proposed to have the duties paid at Bytown instead of Quebec, but abandoned this idea in face of strong opposition from the lumbermen.²⁴



Timber slide & bridge on the Ottawa



Rafts at the junction of the Ottawa and St. Lawrence Rivers

This then was the administrative system the United Provinces of Canada inherited from the old colony of Upper Canada in 1841. But the system was only in force in the Ottawa district. What was going on in the rest of the colony? What were the developments occurring there and in the industry generally which were to create the difficulties of the 1840's?

Southern Ontario, during the first quarter of the nineteenth century, had very little to do with the lumbering industry. Here two or three tiers of townships had been cleared and settled along the waterfront and occupied by pioneer farmers. But by the 1830's, as the pioneers went further inland, they found themselves facing an increasingly difficult task of land clearance. To the would-be farmers, the forest appeared not as an asset, still less as an amenity, but rather as an obstacle to be overcome as quickly as possible. By himself, a lone settler might be able, in his lifetime, to clear about forty acres of forest land, and no more.²⁵ But joined with his neighbours in a logging bee, he could do much better. Groups of settlers did not hesitate, if necessary, to cut down the magnificent virgin timber and burn it in huge piles, to make potash for manufacturing soap and gunpowder. They viewed the lumberman "as a necessary evil, who must be tolerated because he paved the way for the farmer".²⁶

However, as he confronted the tall and intimidating forest stands on the fringe of "Old Ontario" the settler was tempted to turn lumberman himself. He was permitted, and indeed compelled, to cut down enough trees on his lot to build himself a house and barn and fence off his cleared fields. Even after he had started farming, therefore, it might occur to him to go out into the woods and 'make' a little timber on adjacent Crown lands which were protected from trespass by paper regulations, but in fact were open to anyone. It was fairly easy for such a farmer to collect together a small gang consisting of his family and neighbours and anyone else who might be at a loose end in the neighbourhood.²⁷

Six such men, armed with broad and narrow axes and a supply of pork and beans, could spend a profitable fall and winter in timber-cutting. Of course, when spring came around it might not be easy for this farmer to get his timber rafted down to the nearest port or mill. He might find himself involved in unexpected delays due to weather conditions or the state of the timber market, and end up

by being late in commencing seeding operations on his own farm. No doubt, this was the reason why the amateur farmer-lumberman could only compete irregularly with the professional woodsman.

The counterpart of the amateur farmer-lumberman was the 'bogus settler'. He was a speculator who took advantage of the fact that, while the timberman was not allowed to buy timber land from the Government, the settler was encouraged to do so. This speculator would simply apply for a lot as a would-be farmer, pay the initial instalment of the purchase price, take off the timber, sell it, and then let the land, derelict and uncleared, revert to the Crown, before anyone could catch up with his delinquencies. The activities of the bogus settler, the farmer-lumberman and the speculator were relatively unimportant until the 1830's, when a series of events changed the nature of the industry.

As far as the administration of the area was concerned nothing had been done. "I have found it impracticable," Commissioner Sullivan reported to a Committee of the Assembly in 1839, "to collect any important amount of duties on timber cut upon Government lands in other parts of the Province and the expenses attending the attempts to do so have borne much too large a proportion of the sums collected."²⁸ In fact, before anything could be done, he claimed, the Department needed wider authority to seize timber, to reward informers, and to place the burden of proof of ownership on those found in possession of timber. The measures he demanded were taken early in the United Canada period, but it would be another fifteen years before a partially effective administrative structure was introduced.

The events which forced the Canadian administrators to take such steps were extremely complex and had far-reaching consequences for Canada and her forest industry. They originated outside Canada in Britain, where the adoption of Free Trade threatened Canada's timber trade; in the United States, where a new market appeared to save the trade and, with vast funds for investment, changed it. But these developments were slow to influence the everyday life of the average citizen of Upper Canada and it was not until the 1830's that their impact was first felt.

As long as Britain retained the preferential tariffs which had nurtured the Canadian industry, lumbermen were not unduly alarmed by the mother country's dominance of the market. But by

1820 policy makers in London were beginning to show a distressing tendency to reduce tariffs. Convinced, erroneously, that this would ruin their trade, the merchants and lumbermen lodged petition after petition with the colonial administrators. As time went by it became clear that Britain was bent on adopting Free Trade and that consequently the Colonials must solve their own problems. The Canadians must have surprised themselves. As well as introducing the improved system of grading timber which has already been described, they began to establish new trading patterns, new banks to finance expansion, and new public works, chiefly canals, partly for defence purposes, partly to carry produce to market.²⁹ They also discovered that the United States had exhausted its easily accessible supply of timber in the New England and New York regions and was using its only constructed canal system to gobble huge consignments of timber from Canada.

Equally significant was the fact that the Americans were more interested in sawn lumber than in the traditional square timber trade. The British had always demanded square timber and this fact imposed severe limitations on the development of the industry. For example, the lumbermen could not go far from sizeable rivers and streams, since only by water could the huge square timbers be moved more than a short distance. Accordingly, the industry in Upper Canada was confined largely to the Ottawa and its tributaries. Southern Ontario had to await the development of railways and of lake towing, which came at the same time as the opening of the United States market, before the region could exploit its remaining timber resources.

At the same time the local sawmills came into their own and flourished as long as regional supplies of timber lasted. Farmers found they could make a profit from their trees; and some abandoned farming entirely to become lumbermen. These men, and bogus settlers, would in years to come leave what had once been the province's finest timber lands barren and sterile wastes. But by the 1830's the sawn lumber trade had still to flourish for several years before serious symptoms of this malaise were to appear.

However, the farmer and the local sawmill could supply only a portion of the potential American demand. To meet it the Canadian industry had to expand and change. Large sawmills sprang up on the Ottawa and other major rivers and their operations and de-

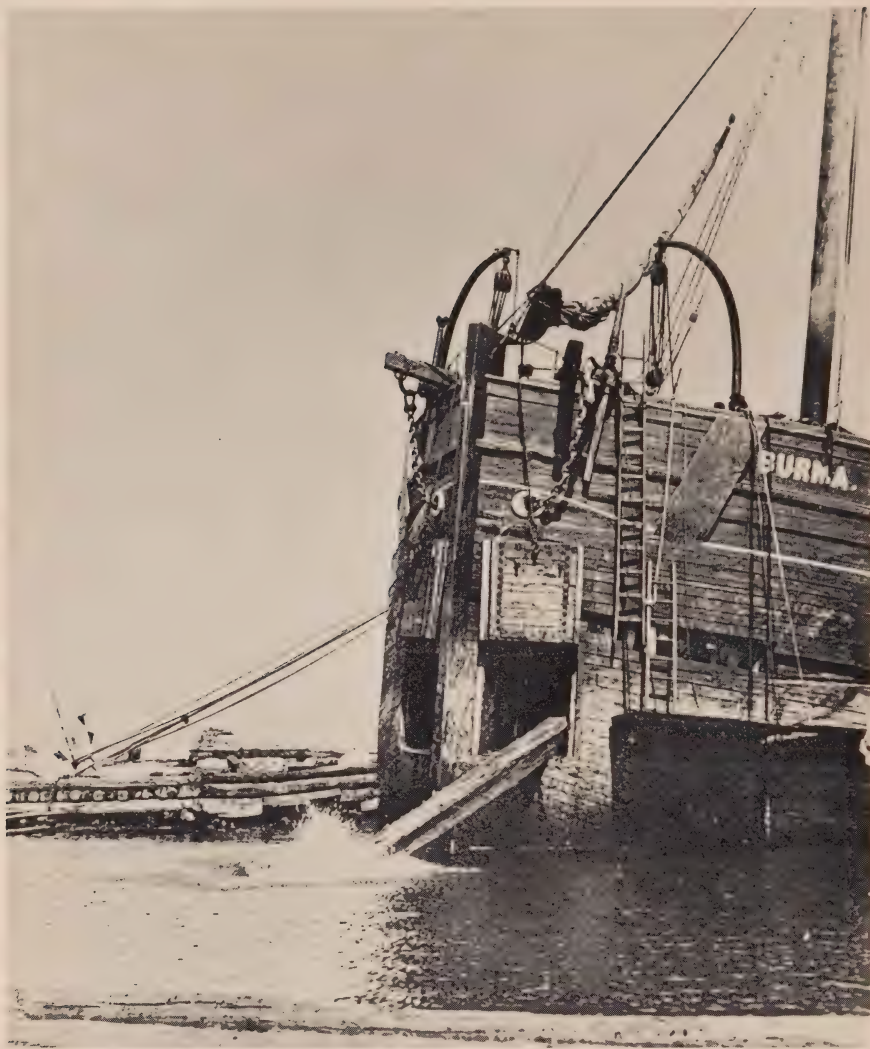
velopment made the greatest impact on the industry. Here, for the first time, United States capital was injected into the industry on a large scale. Now the lumbermen's investments were too great to risk the poor administrative techniques and erratic regulations tolerated in the square timber trade.

As the decade of the 1830's reached its close these changes were only beginning to take place. For the moment Upper Canada was more concerned with the events and aftermath of the 1837 Rebellion, a rebellion which the improved methods of collecting timber revenues devised by Shireff and Robinson had played a small part in causing. These revenues, puny though they were, were counted as part of the "casual and territorial revenues of the Crown", which meant that the Crown's representative and his advisors, rather than the popularly elected Assembly, controlled them. They thus formed one of the supports of an independent and irresponsible administrative class which the leaders of the rebellion eventually decided could be overthrown only with bloodshed.

The rebellion was suppressed, but in the ensuing period of self-examination and promise of reform the Upper Canadians learned much about the manner in which their country had been administered.

In the course of his investigation for the British Government, Lord Durham entrusted his assistant, Charles Buller, with the difficult task of inquiring into the administration of the Crown lands by the colonial officials. His report has been criticized for its unnecessarily harsh assessment of the officials, but much of what he said was quite accurate. When he examined the administration of timber lands he was disturbed that much revenue had been lost because "a wise and careful system of management" had not been undertaken. He found that speculators had obtained large grants of land simply to cut the wood and avoid paying dues. Bogus settlers had done much the same thing. Even where licences had been obtained, a lack of "proper inspecting on the spot" had meant that the quantity of timber cut was often far greater than that for which the licence had been obtained; though the colonial administrators believed that the establishment of offices at Bytown and Quebec, past which the greatest part of the timber had to be brought, guaranteed that nearly all the dues would be paid eventually.³⁰

Many of the abuses Buller complained of were to occur repeatedly



*Timber barge for export of
Square Timber to Britain*

in the future. Popular control of the Legislature, the people of Upper Canada were to discover, did not mean that “wise and careful” administration of timber resources would be achieved easily. The first decade of responsible government was to provide the harshest test the administration of the forest lands had yet experienced.

4

THE BEGINNINGS OF ADMINISTRATION



At Maryville Lodge in York (Toronto), at the junction of King and Ontario Streets, David William Smith, the first Surveyor General of Upper Canada, had his home and office.¹ The office, a large cheerful room with a big fireplace, occupied the northwest corner of the building. In it Smith worked from 1794 to 1804 with his two chief assistants, William Chewett the senior surveyor, and Thomas Ridout the chief clerk, a junior clerk, a labourer and a messenger – not to speak of several additional surveyors and a draftsman engaged on a casual basis. From time to time four deputy surveyors from the four districts of the Province would visit Maryville to report to their chief.²

Although he had no technical qualifications other than his army

training, Smith was a man of integrity with a reputation for caution, hard work, and care for the public interest. At one time he served as Speaker of the House of Assembly; and Governor Simcoe thought so highly of his merits as to declare to Lord Portland in 1799: "I know of no man better fitted to fill the office of Lieutenant Governor."³ Twice during his ten years in office, Smith obtained leave of absence from the Executive Council, to visit England on personal business. On both occasions, he left behind detailed memoranda of instructions to his deputies, on the management of the office. These give us a good idea of the routine of work and the standard of performance that he required.⁴

Office hours were from 10 a.m. to 3 p.m. Every day, the first business was to make out descriptions of all lands not previously entered. Next, warrants of survey were to be executed. Lastly, any new regulations were to be studied and put into effect. All business was to be performed with expedition, but also with due attention and civility to the public. No more than regular fees were to be charged for all surveys. At the end of each month the survey fees were to be turned over to a member of the Council, Hon. Thomas McGill. The deputy surveyors were to render their accounts every six months; and at that time all sums received were to be applied to the salaries and expenses of the office. Thus the principle was maintained that every Government department ought to be financially self-supporting.

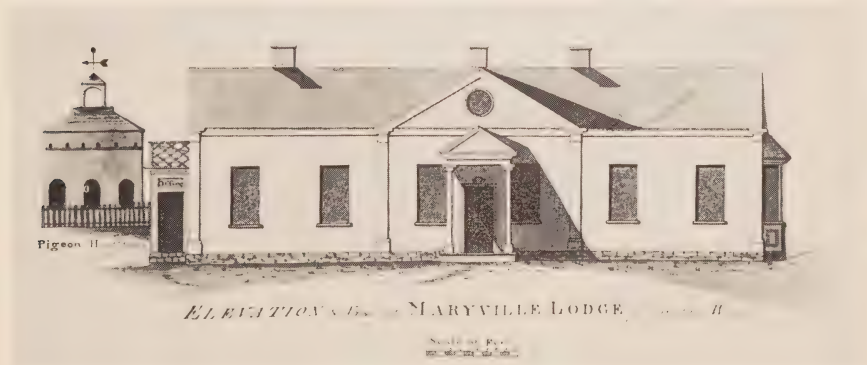
Smith was meticulous about detail. He directed that all papers and plans were to be carefully filed and indexed. Stationery was "to be used with frugality and the covers of all letters laid aside into some niche, to serve for scrawls and calculations." Office doors and windows were to be kept tight shut when no one was in.

No provision for regular audit of accounts had yet been made: but twice, in 1796 and 1799, the Council at Smith's request examined the state of his office and its records, and declared that it was "perfectly satisfied with the mode in which the Surveyor General arranges the business of his office."⁵

In 1804 Smith retired from his position and returned to England, with a government pension of \$200 a year for long service. At his departure his paternalistic method of conducting the business came to an end. Chewett and Ridout, his lieutenants, no doubt hoped for promotion in their chief's place, but both were passed over in favour



SIR DAVID W. SMITH, *first Surveyor General of Upper Canada 1794-1804*



View of Maryville Lodge, Toronto, Smith's home and office

of a newcomer, C. B. Wyatt. Chewett and Ridout were, however, asked to carry on as Acting-Surveyors-General till Wyatt's arrival.

Naturally, the office could no longer be located at Maryville Lodge. The Council decided that all documents, books, papers and maps should be centrally located in a depository in the new Parliament building at the foot of Parliament Street. However, Chewett and Ridout reported that all original documents since 1802 had been taken away by Smith as his own personal possession, although copies of them had been preserved in the office. It took a lengthy correspondence between the Attorney-General and the ex-Surveyor-General to get these documents returned to Toronto.⁶

The new Surveyor-General, who was young, inexperienced and aggressive, did not last long.⁷ He soon quarrelled with Ridout and dismissed him from his staff. At the same time he made the mistake of dabbling in politics, and of supporting Judge Thorpe, one of the reforming critics of the family compact. In particular, Wyatt offended Governor Gore by submitting his books to the inspection of the Assembly, instead of confining all departmental responsibilities to the Executive Council. For this the Governor first over-ruled Wyatt's action in dismissing Ridout, and later forced the Surveyor-General himself to resign. After some years of wrangling and litigation, Ridout finally secured confirmation of his own appointment in Wyatt's place.

Ridout, who had a Loyalist background, was popular with the public but had the misfortune to hold office during the troublesome years of the War of 1812, when York was raided by the enemy, the Parliament House burned down, and the cash funds of the Land office carried off by the Americans. By 1820 a new Parliament building was built; but four years later it too was destroyed by fire. For the next eight years therefore Parliament met in the General Hospital and the Court House. The constant shifting of the Surveyor-General's office and papers entailed by these changes cannot have been conducive to the routine and morale of Ridout's staff.

Emigration from Britain was now rapidly increasing, and the Surveyor-General's office alone could hardly cope with all the new business. In 1827 a second Land office was created and Peter Robinson, a member of the family compact, was appointed Commissioner of Crown Lands. He had the task of ending the previous system of free land grants, and substituting for it the New South

Wales system of selling lands outright to immigrant Britons with capital.

That same year Peter Robinson was also appointed Surveyor-General of Woods and Forests, for the purpose of organizing timber licences and improving the revenue from timber. He had received detailed instructions from London on the conduct of his office, but paid little attention to them. Instead, he left the management of the Woods and Forests Department largely to Robert Shireff of Bytown whose erratic and unbusinesslike administration has already been described. Meantime, Robinson had concentrated most of his attention on the Crown Lands which, from 1832 onwards, shared offices in the Parliament Building with the Woods and Forests, Clergy Reserves and Emigration Departments.⁸ They employed between them from half a dozen to a dozen clerks, who were generally discontented, overworked and swamped with arrears. The registry section of the Department was run well enough, but the cash and bookkeeping sections were in disorder from the beginning.

No proper books of account – such as ledger and journal – were kept, nor were vouchers made out for receipts and disbursements. Considerable deposits of money were frequently paid into the office, on account of instalment payments due on land purchases. Usually the clerks pencilled these sums on the margin of the payer's account in the sales book. Unfortunately the amounts so paid in did not always correspond with the dates when they fell due, and the balances were therefore often in confusion. The cashier kept no regular cash book in the office and often paid sums in or out, without passing anything through the bank: on one occasion £1,617 in cash was found missing and unaccounted for. The balance of receipts over expenditures was credited to the Commissioner's own personal account at the bank, which alone could supply the office, at any given moment, with a correct statement of the balance. Monthly salaries to clerks were often in arrears, and it was not unknown for members of the staff to get personal loans from the Commissioner.

Under these circumstances, the staff of the Crown Lands office became more and more disheartened. In 1837 the head clerk, R. H. Thornhill, and one of his colleagues, took commissions in the militia at the time of the Rebellion crisis, thereby "leaving the department . . . in the most deranged state."⁹ Another clerk, Andrew Todd,

then had to take over their duties without extra pay; he was later dismissed for irregularities in his accounts.

Peter Robinson himself, who all this time was an active member of the Executive Council, could not effectively carry the burden of administering the two departments. He was inundated with complaints from land applicants regarding delays in answering correspondence, supplying information, and investigating problems. In 1836 his health gave way under the strain, he suffered a stroke, and Governor Sir Francis Head had to replace him with R. B. Sullivan, the ex-mayor of Toronto. Sullivan tried at the beginning of 1839 to institute a system of bookkeeping by double entry, but after six months' trial the office abandoned it and reverted to a complicated system "exclusively adapted to one unvarying routine of payments on certain specified accounts."¹⁰

The miserable state of the Crown Lands and Woods and Forests Departments was paralleled by that of the Surveyor-General's Department. Ridout had died in 1829, to be succeeded after an interval by Samuel Hurd, under whom the efficiency of the office steadily declined. The staff of six clerks and one draftsman fell more and more under the control of the Chief Clerk, John Radenhurst, who had an axe of his own to grind.¹¹ Radenhurst's official duties consisted of examining and reporting on patents and land claims, issuing certificates, instructing surveyors and answering correspondence. But, neglecting these, he chose rather to concern himself with the deficiencies of the Crown Lands Department ("a subject," Sir Francis Head pronounced, "of universal and I must say, just complaint") and developing his own private land agency in its place. Thus, whenever an Order in Council was issued directing that certain lands were to be disposed of at public auction by the Crown Lands Department, Radenhurst would step in and arrange to sell off the best lots privately to favoured individuals – of course at a commission payable to himself. On the other hand, he neglected the routine business of his own Department, where "indifference, laxity of attendance and growing arrears of work" prevailed.

The Surveys Department now fell into the habit of employing incompetent and unqualified persons as surveyors, with the result that errors in surveys multiplied, purchasers were given overlapping titles and descriptions of their land, and fees were illegally charged to remedy the mistakes. Surveyors' field notes were lost, and the

Department's sets of maps and plans were allowed to become dilapidated. Endless time had to be consumed on checking statements of claim and finding the information necessary to verify them.

Early in 1836 a feud erupted inside the Department. A young clerk, William Spragge, who had been appointed by Ridout, became disgusted with what he saw of Radenhurst's malpractices and denounced him to the Council. The charges were temporarily suppressed by the Council, as coming from a junior; but they were revived later the same year when Samuel Hurd resigned as Surveyor-General for reasons of ill health, and Radenhurst applied for the vacant post. Radenhurst had made himself popular through the special favours he had obtained for his friends; nevertheless he was passed over because of Spragge's unsifted charges, and the Governor appointed another military man, named Macaulay, to the post. Radenhurst's failure rankled, and the feud between Spragge and himself smouldered on to a second outburst three years later.

In 1837 a new Lands Act was passed to launch the New South Wales system of land grants to settlers.¹² Thereupon the House of Assembly proposed that, in the interests of economy, the office of Surveyor-General should be amalgamated with the Crown Lands office, under a single Commissioner. This proposal, based on the mistaken notion that the Survey business was going to decline in volume, was accepted by the Governor, who installed in charge of both departments the incumbent Crown Lands Commissioner, R. B. Sullivan. But, as Spragge later testified, "a supposition so erroneous could alone be entertained by those having a very imperfect idea of the duties of the department."¹³ Both departments needed not less but more supervision and therefore the amalgamation under one already overworked head was bound to be a failure.

At last, after the publication of Lord Durham's *Report on the Affairs of British North America*, with its scathing condemnation of the whole Lands system, the House of Assembly in Toronto, in May 1839, demanded the appointment of a Committee to investigate the workings of all the provincial Government departments. Governor Arthur agreed to this long overdue step, but to mitigate its harshness, set up two joint committees of the Executive and Legislative Councils. The second committee was concerned specifically with the Receiver General's Department and with the Lands offices. Their

enquiry unleashed a flood of criticism from officials and politicians.

The redoubtable William Spragge renewed his attack on John Radenhurst with a reminder that "probity and impartiality are among the necessary qualifications of a public servant." The locating of land sales, he pointed out, had for some years been exclusively his duty in the Department; but latterly Radenhurst had taken the work out of his hands, and interfered with it by giving to favoured persons land which the Council had ordered to be disposed of at public sale. "The official favour which he distributes is such in its nature and amount as no head of a department has ever exercised."¹⁴ Spragge stated that his eleven years' experience had convinced him "of the existence of a system of partiality, favouritism and corruption; begun at an early day, and continued, with but few interruptions, up to the present time."¹⁵ The regulations made by Government had "been defeated by the encouragement afforded by the Surveyor General's Department to monopoly and speculation, and by the assistance rendered to those who desired to evade such restrictions as interfered with their projects for personal aggrandisement at the expense of the resident proprietors of land."¹⁶

These were strong words to come from a junior civil servant speaking his mind about his colleagues before a Parliamentary Committee! Spragge, however, had a wider vision to express, that went beyond criticising the shortcomings of others. "The settlement of the Crown Lands," he told the Joint Committee, "is too generally received as a mere matter of pounds, shillings and pence." It had been a profound mistake to sell off the public lands only to the highest bidders, whether subjects or aliens. Instead, those lands ought to be offered first to emigrants from Britain, who would make settlers whose faithful loyalty would some day repay the interest shown them by the Government. "Until such extensive alterations are adopted," he warned, "the resources of this country can be but partially developed, our rear country must continue a wilderness, and the sons of many of our most enterprising farmers, as they arrive at manhood, will continue . . . to emigrate to the United States."¹⁷

It is pleasing to find that Spragge's temerity did not bring any unpleasant consequences down on his own head. On the contrary, he was one of the many civil servants carried over to hold posts under Lord Sydenham's regime in the 1840's. There he continued

for many years to voice forthright criticism of his own bosses whenever he thought they were seriously in the wrong.

Another forthright witness to appear before the Joint Committee of 1839 was J. G. Chewett, who had at one time been Acting-Surveyor-General. He not only supported Spragge in his main criticism, but coined a lurid phrase that struck the Committee so forcibly that it was incorporated into the final Report. “I cannot help remarking,” said Chewett, “that the system upon which lands have been granted, was the greatest prostitution of the Sovereign’s Bounty ever practised in any country.”¹⁸

Subsequently, the Executive Council presented their Report on the Commissioner’s findings to the Lieutenant-Governor, with their own rather mild conclusion that “there has been inattention, irregularity and a departure from established rules in the conduct of business in this (the Surveyor-General and Crown Lands) Office.”¹⁹ Afterwards, Radenhurst was dismissed, Sullivan exculpated but superseded by a new Commissioner. The practical application of the lessons of the Report was left to the new House of Assembly that took over, under Governor General Lord Sydenham, the Union of the two Canadas.

PART II: CONSOLIDATION AND
CONSERVATION, 1842-1900

5

THE LAND SURVEYOR AND HIS WORK



Accurate land measurement, or surveying, is the basis on which every civilised community has developed its natural resources. In Ontario, a province that has grown in two centuries from an unmapped wilderness to a mighty complex of agriculture, industry, cities and communications, the land surveyor has played a vital role in the progress of development. We can divide that development into two stages.

Between 1763 and 1890 the surveyors surveyed into township lots and concessions the southern part of Ontario, which comprised less than one sixth of the total area of the Province, but more than nine-tenths of its population. They subdivided it into five hundred and eighty-eight townships, belonging to seven distinct types. The

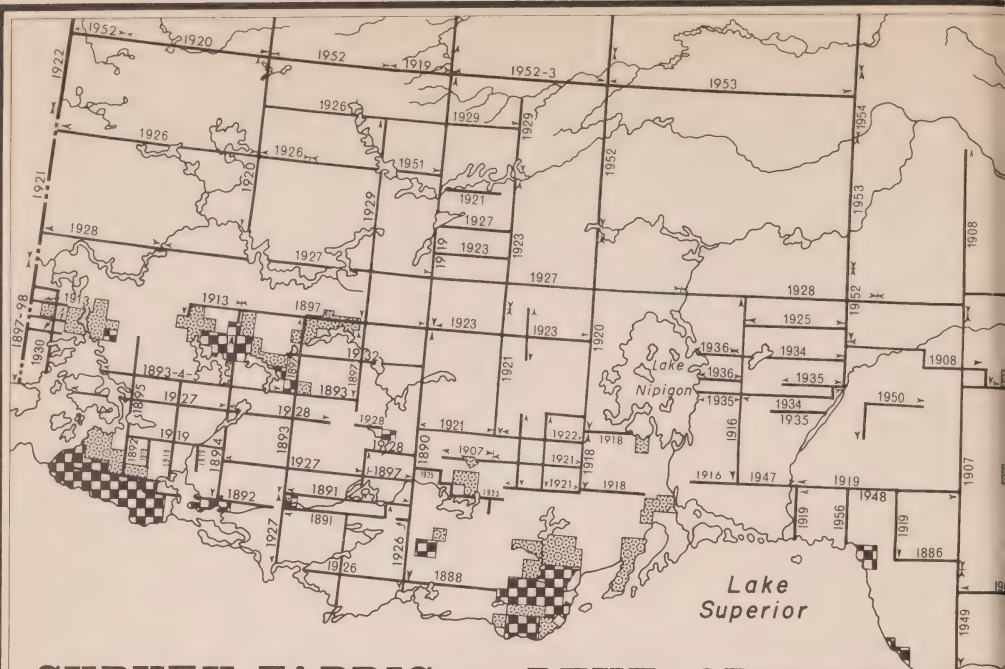
main purpose was the promotion of settlement and agriculture.¹

Then, from 1890 onwards, when the disputed western and northern boundaries of the Province had been settled, the surveyors were called upon to survey the northern part of Ontario, with its far greater area and much scantier population. Here the purpose was to report on the possibilities of developing mining and lumbering, with a very limited amount of agriculture in a few areas. Up to the present time, the surveyors have surveyed five hundred and fifty-three townships in Northern Ontario and subdivided them into concessions and lots; also they have marked out the exterior boundaries of another thirteen hundred and eighty-six townships.² Together these townships represent about twenty-seven per cent of the area of Northern Ontario, exclusive of the Great Lakes. Besides these townships, they have also surveyed some four thousand five hundred miles of base and meridian lines, together with over fifteen thousand square miles of lakes and rivers. All this work has been done under Crown instruction, through the Department of Lands and Forests.

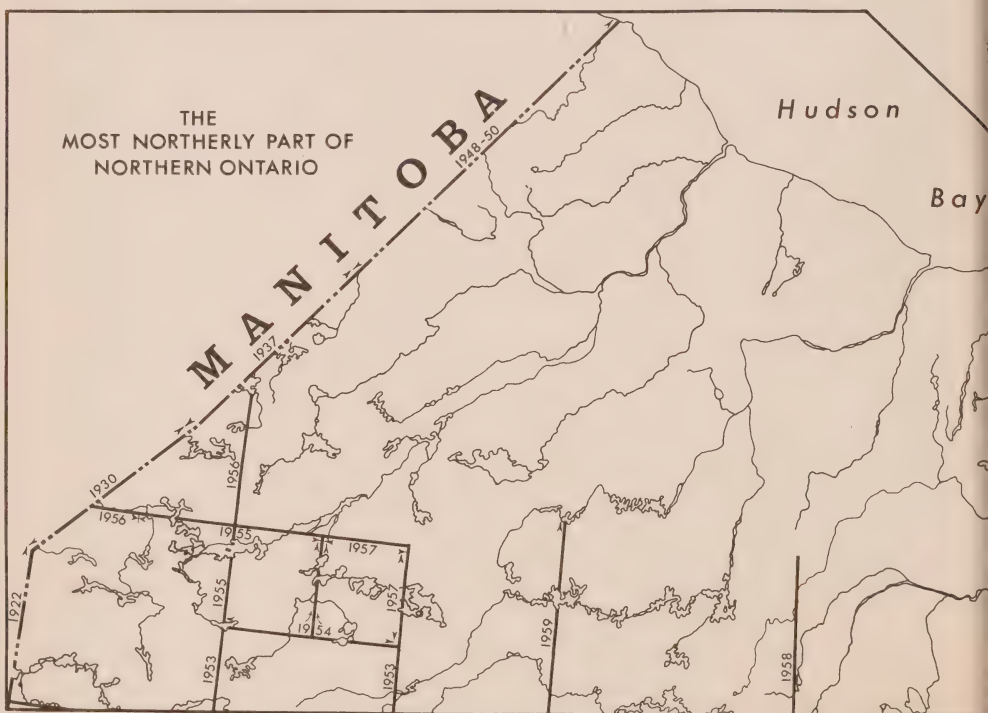
During both stages – surveying for settlement, and surveying for exploration – the surveyor has had to do his work before any kind of development could begin. Before land could be subdivided and owned, he had first, as required by Indian Treaty, to survey it. In many cases, he was called upon to do much more than merely measure the land. He was required to assess its potential value, in terms of soil, terrain, timber, waterpower, minerals and wild life, for the purpose of facilitating the building of roads and railways, and locating mines, as well as encouraging farming. Further, until the advent of aerial photography about 1920, the Government depended almost entirely on the land surveyor to provide it with data for making maps and establishing boundaries. Thus he had to act sometimes in the capacity of explorer and sometimes (in relation to the growth of settlement) in that of promoter and Crown Land agent. He had to report on such matters as the navigability of streams, the location of mill sites, the quantity and quality of timber, the extent of burned-out areas, the suitability of land for roads and railway beds and, above all, the quantity and quality of land available for agriculture. All these tasks the surveyor had to carry out under conditions of considerable physical hardship, and with the use, over much of the period, of what would now be considered primitive equipment and techniques.

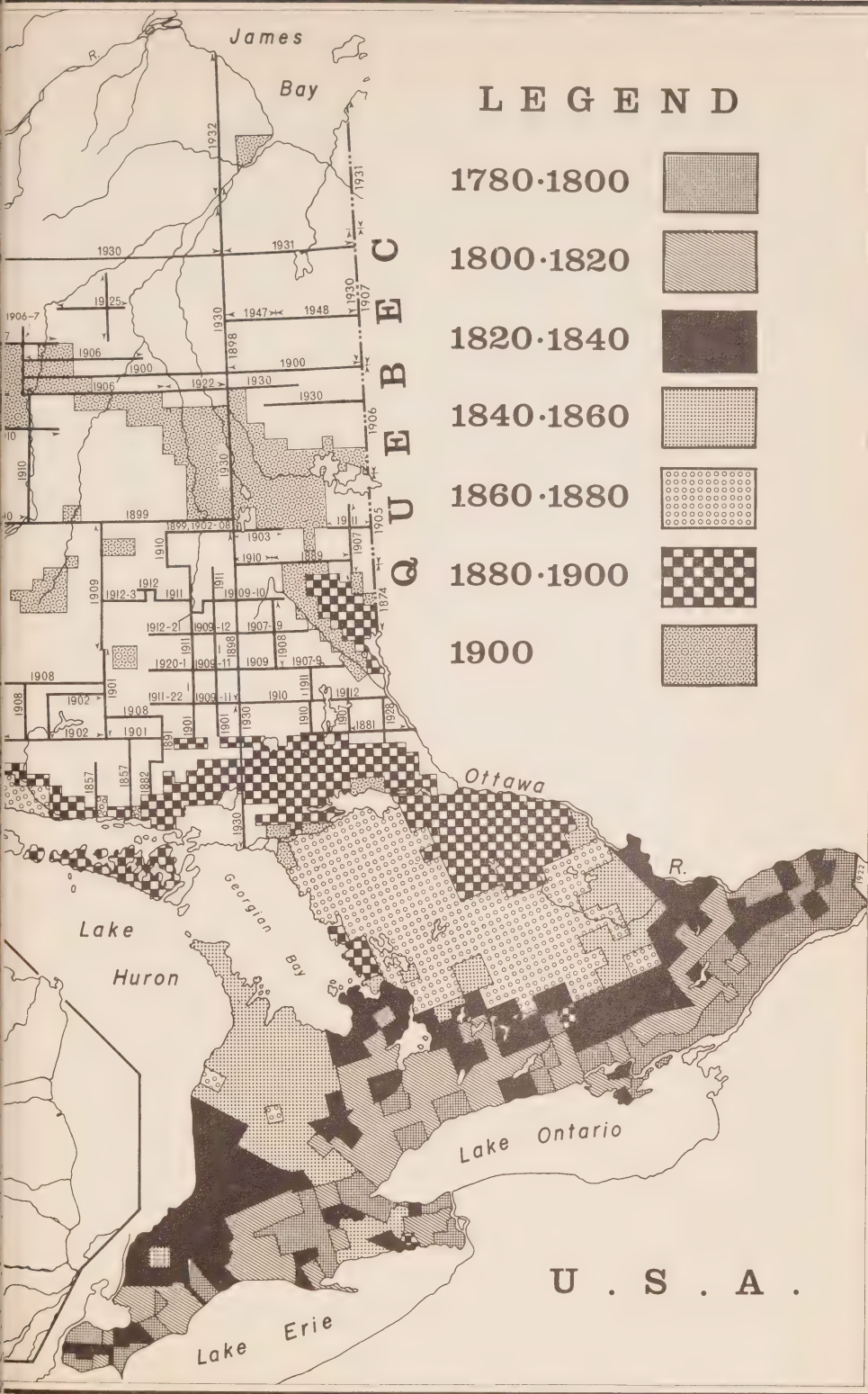


Two water-colour sketches from the field note-books of the original surveys by T. B. Speight, P.L.S., of the sub-division of the Township of Kerns in 1888 and the sub-division of the Township of Ledger in 1894



SURVEY FABRIC AND DEVELOPMENT IN THE PROVINCE OF ONTARIO





No wonder that these surveys were often faulty, in terms of modern standards of accuracy, and required later re-survey. For example, an error in an original survey made near Ottawa in 1820 was not rectified until nearly a hundred years later.³ Again, in Kennebec Township, a boundary overlap with a neighbouring township required for its correction the creation of a government commission and the preparation of a special surveyor's report.⁴ Until 1903, before which date most of Ontario surveys were made, the surveyors used posts of cedar or spruce as monuments. These naturally decayed and vanished in the course of time and had to be replaced in recent years by wrought-iron or, later, bronze-capped steel posts. Incidentally, survey monuments have always been strictly protected by law from interference. At one time the crime of removing or defacing a survey post was punishable by death.⁵ Today it is an indictable offence carrying a penalty of five years imprisonment.⁶

The inaccuracies of the early surveys created serious problems in land conveyancing, following the granting of lands by Crown patents. These inaccuracies, in a wider sense, affected the course of land settlement in the Province. The surveyors sometimes judged the suitability of land for agriculture by assessing the crops that were already grown in the area; if there was no settlement, they relied on observing the character of the soil and its vegetation. In the Thunder Bay surveys, for example, observations on the farm plots at the Hudson's Bay Company posts and at Indian clearings were the surveyors' only clues to the quality of the farmland. From their reports it is clear that, try as they would to be accurate and unbiased, they tended, on the whole, to give land a better rating for farm purposes than it really merited.

Such errors in judgement were commonly due, in the early period, to the surveyor's lack of qualifications and the absence of government provision for inspection of work performed. Much of the pioneer work in Southern Ontario had to be done by army surveyors and gunnery officers who were not trained in the skills of land surveying. From 1792 onwards the Surveyor General, acting under the authority of the Lieutenant Governor, appointed all deputy-surveyors. It was not until 1849 that legislation was passed establishing the qualifications necessary for the profession.⁷ This legislation set up a board of examiners, consisting of the Commissioner of Crown Lands and six others appointed by the Governor.

Candidates had to be at least twenty-one years of age, and were required to serve a three-year apprenticeship to an established surveyor, as well as to pass an examination in geometry, trigonometry, mensuration, map-drawing and enough astronomy to enable them to determine latitudes and longitudes and the astronomical bearings of lines on the ground. This did not, of course, give them any special training in mineralogy or timber evaluation. By 1860 the profession was fully organised on a self-governing basis, through the Association of Provincial Land Surveyors (incorporated in 1886). Under this arrangement the Government was able to keep control over public surveys on Crown lands; it did not assume the responsibility for surveys performed on privately owned lands. In 1892 the Government limited its share of the control to ministerial membership of the Association's Council of Management. Between 1783 and 1886 only six hundred and ninety-seven surveyors received commissions to practice. Today over five hundred persons are engaged in the practice of professional land surveying in Ontario.⁸

After 1849, whenever a particular survey was ordered, the Crown Lands Department would engage a qualified surveyor to do the job, with pay at the standard rate of five dollars a day for himself, three dollars a day for "explorers", one dollar a day for "chainbearers", and one dollar a day per man for rations. The surveyor was then given detailed instructions, of which we may take as an example those issued to P. L. S. Walter Beatty on June 18, 1870.⁹ Beatty was one of two surveyors engaged to survey the Seventh Base line north of Lake Superior. In his instructions he was told to employ a party of twenty men, including two explorers and two chainmen; and to take his men and supplies to "Lake Neepigon", where he was to split his provisions and make two separate caches.

"You will explore the country on each side of your line to the depth of fifteen miles, taking down and entering in your field book the character of the country through which you pass, as well as the kind of timber in order of its relative abundance, the general appearance of the face of the country, whether level, broken, hilly or mountainous, all marshes, swamps and meadows, all lakes, ponds and rivers, with a description of their banks, and whether their waters be deep or shallow, pure or stagnant, all springs, all brooks and rivers with their widths, depths and courses, the rapids and falls, giving the estimated difference of level in feet, all minerals, the traces of fires, etc."¹⁰ Such detailed instructions appear to have



Portage difficulties with old-time surveyor's equipment

been the rule and were usually carried out to the letter.

Once he had received his instructions and acquainted himself with the nature of the work required, the surveyor had the full responsibility for hiring his own crew and providing them with the necessary food, equipment and transportation. The key personnel included, besides the surveyor himself, two good chainmen capable of keeping notes, a good cook and an assistant capable of taking charge if the party had to split up in the field. Supplementary help, such as the axeman (commonly an Indian), was usually hired locally. Travel was generally by Peterborough canoes which, being reasonably leak-free and easy to repair, were considered the best for carrying supplies in bulk. Enough food of good quality was an absolute essential to the success of the survey. Fifty pounds of cereals (including dried beans) per month, and one pound of bacon per day, were allowed for each member of the party. Tea, bacon and flour were the basis of the woods diet; but variety in the form of bread, ham, cheese, butter and sea-biscuit was considered helpful in maintaining morale. Pickles and jam, however, were long regarded by the Crown Lands Department as articles of luxury whose mere appearance on a surveyor's ration list would be enough to destroy his prospects of getting another government survey. Joseph Cozens

THEN AND NOW



Early surveyors in camp

Modern helicopter moving men and equipment from camp to survey line



of the Sault, a veteran surveyor of high standing, was the first to break this taboo by including two bottles of pickles on his list for 1896 and adding jam the following year.¹¹ Yet, even before this time, it was possible for a survey party to make itself pretty comfortable in the bush. Here is a glimpse of oldtime camp life about 1885, given by surveyor James Dickson in his book on *Camping in the Muskoka Region*.

Darkness had now set in", he writes, "and what about supper? Our cook has not been idle. A huge fire is blazing away a few feet in front of the door; a stout post about four feet long, cut from the top of a small tree, where the trunk has branched off into two parts . . . has been securely driven into the ground a foot or so from each end of the fire. Across those another stout pole from which the tea pail is depending. The cook, with glowing but merry face, leans over the frying-pan, carefully stirring and turning the frizzling slices of the 'unclean beast' . . . In a few minutes everything is in readiness. Pork and biscuits and dishes of tea disappear with amazing quickness and in goodly quantities, for the afternoon's work has given all hands a good appetite, while joke and jest are bandied from side to side. Supper finished, pipes are lit and a general smoke is begun. The sight is a pleasing one . . . The merry group, the snow-white tent, the blazing fire, the illuminated trunks of the huge pines, and lights and shadows amongst the green leaves, the silvery ripple of the river where a single ray from the fire has penetrated to its surface, the glittering stars overhead, the soft mellow light of the moon as she shows her face above the eastern hill, the solemn stillness of the night broken only by the gentle murmur of the adjacent rapid. Attempt to describe it. Pshaw!

By 1909 it was possible for a speaker for the Ontario Land Surveyor's Association to boast that "all the articles generally found in the best boarding houses are now found on the surveyor's list."¹² These included fresh vegetables but not, for reasons of weight, canned foods.

Beside the food, the party took along an outfit of instruments, axes, cooking utensils, tents, blankets and personal gear that averaged a hundred pounds weight per man. Everything had to be the lightest that was serviceable (e.g. tin pans, 3½-lb. axes) for portaging purposes.

For winter surveys, snow shoes and toboggans had to be taken in lieu of canoes and carts; and, of course, the men supplied themselves

more liberally with rum. To combat the cold, two tents would be pitched opposite one another, with a roaring fire in between, an arrangement that was often smoky and not necessarily warm. Sleeping bags were not yet in common usage; the men usually had to make their own by sewing blankets together. Under these conditions, needless to say, winter surveying was neither very popular nor very common. Not till the twentieth century did conditions improve, with the introduction of new fabrics for tents and clothing, and the use of the aeroplane and snowmobile to bring in supplies.

Survey instruments, all supplied by the surveyor, were of the highest quality he could afford, because on them depended the accuracy of his work. In the early nineteenth century, the basic instruments in use were the compass and the Gunter's Chain. The surveyor used his sighting compass for running lines; but work done with this instrument was liable to inaccuracy because of magnetic deflections of the needle caused by adjacent bodies of mineral ore. Some surveyors used a more precise, but also more expensive instrument, the transit theodolite, to produce the lines and to make astronomical observations for the purpose of ascertaining the position and direction of survey lines. At that period, theodolites had to be imported from England. Deputy-Surveyor Robert McLean was the first man in Ontario to construct his own in 1812.¹³ Though McLean could hardly write his own name and was quite unskilled in metal work, his instrument turned out to be remarkably accurate. By about 1850 most surveyors were using a modified theodolite, called a Surveyor's Transit,¹⁴ designed in Philadelphia in 1831. With this they would first obtain their bearings and afterwards revert to the compass to run their lines – a procedure that, of course, still exposed their work to inaccuracies.

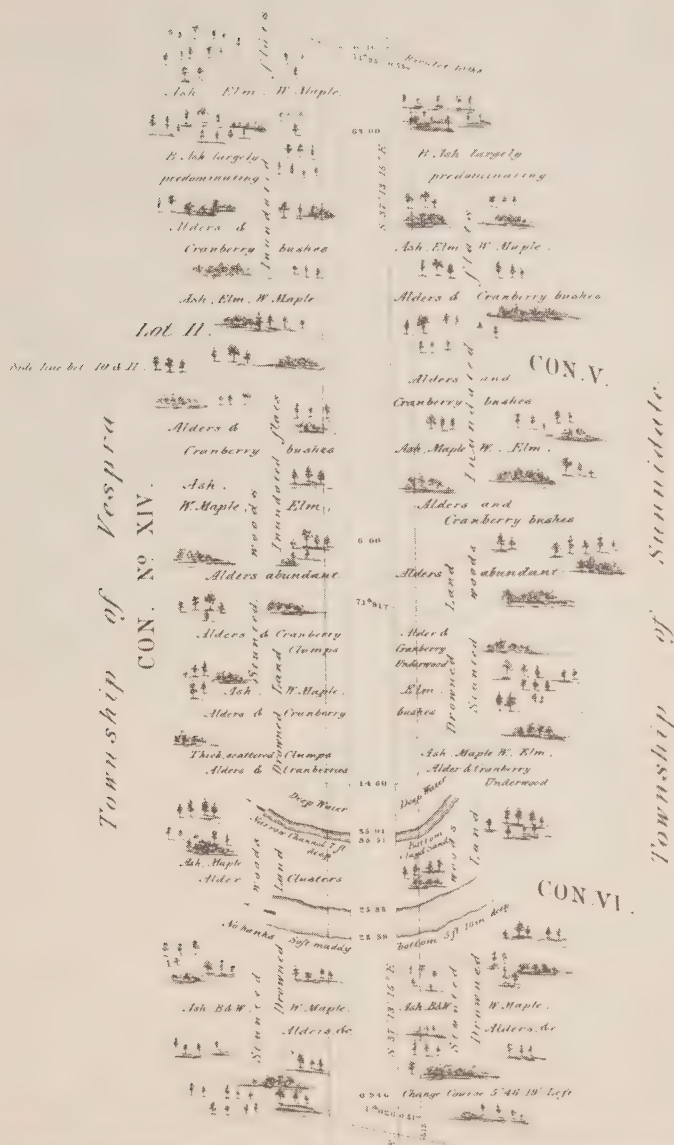
The other basic instrument, the chain, was also unsatisfactory in some ways. The Gunter's Chain¹⁵ (named after its inventor) was sixty-six feet, or one chain, long; it was used for measuring distances. But its hundred iron links were liable to kink and tangle when it was being drawn along the ground; also, as the links became worn, they tended to open out at the joints and allow the chain to stretch, thus spoiling the measurements. To reduce these faults, from 1850 on each surveyor was supplied with a "standard" wooden yardstick, marked with scale graduation in inches and links. The sixty-six foot hundred-link chain was finally superseded in 1900 by the steel tape, which is still in use today.



THOMAS DEVINE, *inventor of the split-line method of making field notes*

The information gathered by the surveyor he embodied in his field notes, which covered the terrain and any landmarks he might observe. Down to 1869, he might make his notes in a variety of ways. Sometimes he entered them in the form of simple paragraphs of running description. Sometimes he made double-column entries on each page, specifying his bearings and distances on the left-hand side, and the landmarks crossed by his survey lines on the right-hand side. In 1857 Thomas Devine, then the chief Surveyor of Upper Canada, introduced a new system of note-making called "the split-line method", which used pictographs to represent landmarks.¹⁶ Under this system the survey line was drawn running down the centre of the page; however, it was split down the centre so as to form, in fact, two parallel lines with a space between them. In this space the measurements between landmarks were entered; and on either side of the space pictographic or written representations of the landmarks were added. Devine's system of field notes received the Government's formal approval on April 2nd, 1859.

When he reached the area of his survey, the surveyor would first locate the starting point mentioned in his instructions. This might be a survey post established on a previously-run base or meridian

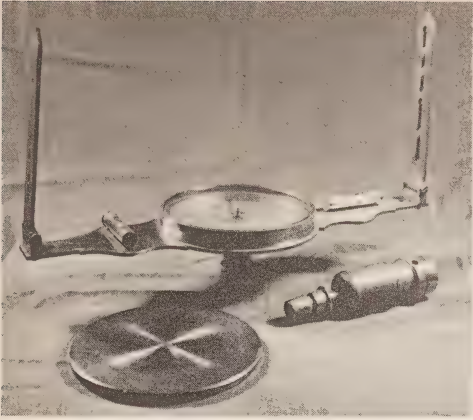


line. However, if he were in completely unsurveyed territory, he might have to take astronomical readings in order to establish a fixed point on the earth's surface from which to run his lines. An easier way to do the job was to plant a post at some logical place along a railway track (if one existed) and work from there. This method might result in creating fractional townships at places where two separate surveys overlapped. In some cases these fractional townships might be left as surveyed; in others, they might be attached to an adjacent township by proclamation.

If the purpose of the survey was exploration only, it was not so important to define precisely a starting point. In such cases the instructions usually specified a certain landmark, such as a lake or a Hudson's Bay Company post. In the explorations carried out north of Lake Superior in 1870, the surveyor was often instructed to take a compass bearing from his starting point, and follow a straight line in a given direction until it intersected some stated landmark, such as a lake. While following this line, he was to explore on each side of it to the depth mentioned in his instructions. He marked out the line itself by blazing trees or planting survey posts. Upon completion of his work, the surveyor would turn in to the Department his plan of work, a map, his field notes, diary and report, and his accounts and pay lists attested under oath.

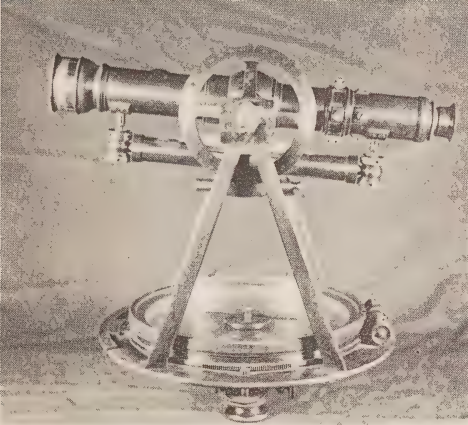
During his trip, the surveyor was responsible for the safety, health and conduct of each member of his party. Should the going be rough, he had to be constantly on his guard against possible desertions. It was usual to protect the food supply by making a cache of the bulk of it at the point where the party entered the area it was to survey. To keep the food dry, cool and out of reach of animals, the party would build a crib of logs with a platform on top, raised and supported by peeled poles on which the food lay under a tarpaulin.

Down to the time of World War I, survey parties engaged in bush travel in a remote area were cut off from civilization for long periods, and of course had not the benefit of radio communication and plane transportation. Under these circumstances the surveyor or some member of his party had to have some knowledge of first-aid, medicine and dentistry.



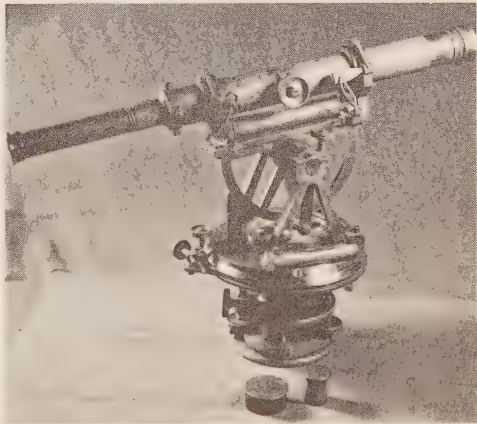
TOP LEFT *Compass, 19th century*

TOP RIGHT *Gunter's Chain*

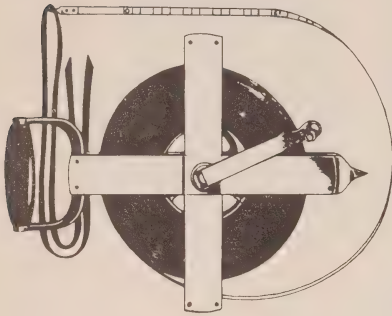


MIDDLE *Transit compass, circa 1855*

BOTTOM *Theodolite, circa 1830*



MODERN SURVEY INSTRUMENTS



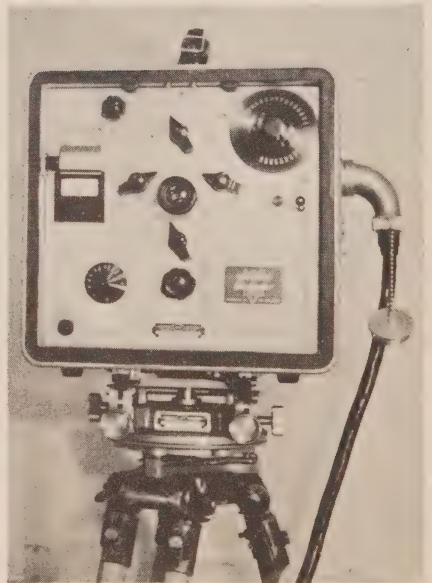
Tape Measure



Split Line Picket



Theodolite



Geodimeter

Surveyor's diaries do not, for the most part, mention the ordinary day-by-day hardships encountered in bush country, such as man-packing supplies over long journeys (up to a hundred days) over marshes, rough terrain and windfall forest; axe cuts, sprained or broken limbs, dysentery, abscessed teeth, food shortages or encounters with abnormal swarms of black flies and mosquitoes. Such hardships were taken in their stride. However, more serious troubles were not uncommon. They included occasional loss of life, severe forest fires and floods, the necessity of leaving seriously hurt men to fend for themselves until the completion of the job, encounters with hostile Indians and, from time to time, the risk of starvation. A few brief quotations from surveyors' reports will illustrate these more dangerous aspects of the work.

Surveying the well known Bell's Exploration Line across Muskoka in the winter of 1847, Robert Bell and six of his nineteen men suffered from an acute shortage of food, as well as severe floods, during the mid-winter months. They were only saved from disaster by a relief drove of three dozen oxen, which in spite of Bell's disablement by a month's sickness, enabled them to complete the work.¹⁷

In 1910 T. B. Speight and his party, while surveying base and meridian lines in the District of Algoma, suffered the loss of a promising Toronto University student, Alan Henderson, who succumbed to the intense heat, combined with drinking impure water from icy muskegs. The superstitious Indians who largely composed the party were so upset by this calamity that eight of them deserted and were replaced only with great difficulty.¹⁸ The same party had had a narrow escape from death two years earlier, in a bush fire started by prospectors.

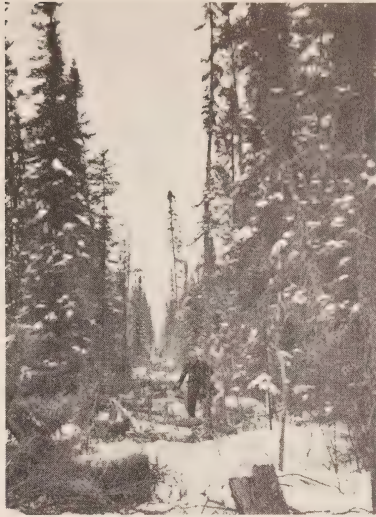
In 1920 K. G. Ross and his party, surveying the eleventh base line in Patricia District, encountered great difficulty with Indians of the Pekangekum Reserve who protested vehemently against the line heading for their lands. The local chiefs had to accompany the survey party to protect it, until Ross agreed to offset the line to avoid further trouble.¹⁹

Besides overcoming the hardships of their profession, Ontario surveyors have made many notable contributions to the achievements of the Department of Lands and Forests. An outstanding example of this was the series of surveys made by James Dickson

of Fenelon Falls in 1886-7 (see Chapter Nine) to prepare the way for Algonquin Park, and his subsequent membership of the Royal Commission of 1893 which brought the Park into being.²⁰ The most ambitious survey of the century was the project for the exploration of Northern Ontario launched under Crown Lands Commissioner E. J. Davis in 1900.²¹ This expedition, which cost forty thousand dollars, employed ten separate parties each under a surveyor (two of whom died in the course of their work) accompanied by a geologist and a land and timber estimator, to explore the whole hinterland lying between the C.P.R. and James Bay. Besides assessing the vast mineral and forest wealth of the area, the explorations resulted in the discovery, and opening up to agricultural settlement, of the important 'Clay Belt' of fertile land lying to the west of Lake Abitibi.

Since 1900 the techniques of survey have been refined by mechanization and invention, which have speeded up the work and increased its accuracy. In 1921 the Department of Lands and Forests began to use aeroplanes and aerial photographic equipment as a means of assessing the quality and quantity of Ontario's forest resources. They also became important for aerial mapping and even ground survey work. Planes, helicopters, two-way radio, the camera and motorized transportation between them have enabled today's surveyor to extend his operation to places and operate under conditions that would have been considered impossible a couple of generations back. The modern surveyor also has a range of greatly improved survey instruments at his disposal. The present day theodolite provides telescopic magnification of 28X and gives readings of horizontal angles that are accurate to the nearest second. The steel tape measure has superseded the old surveyor's chain, and has gained increased efficiency by the use of the tension handle. The geodimeter (invented in Sweden) can now measure short distances up to half a mile in daylight (longer at night) by sending a pulsating light-beam travelling between two points; while the tellurometer (invented in South Africa) uses electromagnetic waves to measure longer distances from five to forty miles.²²

A good illustration of the advantages of mechanized equipment in modern surveying is afforded by the completion of the Ontario-Manitoba Boundary Survey in 1948. For fifty years this difficult work had dragged on, hampered by primitive conditions of trans-



Survey line looking North

port. An earlier survey in 1929 had carried the boundary line northward from Lake of the Woods to the Twelfth Base Line, leaving a distance of 282 miles of thin forest, rough bush and muskeg to be covered in order to prolong the line to Hudson Bay. During Spring 1947 this line was photographed from the air, and a strip map prepared. Then in December, according to F. W. Beatty's account published in *Sylva* magazine, the Manitoba Government Air Service flew the survey party in to God's Lake, where the work was to start. This was the first time aircraft had been used as a permanent accessory to a survey, for moving camp, bringing up supplies and laying down food caches. Now, on moving dates, the party could work in two sections; one consisting of axemen employed in establishing the new camp and cutting wood, while the other completed at the old site the chaining, establishing markers and taking the necessary observations. The survey party could thus advance steadily at a rate of ten miles per day with the help of dog teams, radio transceiver, an electric generator, etc., as well as aircraft. The staff lived in pyramid tents with five foot walls equipped with an extra wall for air space, and enjoyed the benefit of good hot meals, electric lights, and other comforts. Under these conditions the two hundred and eighty-four miles of wilderness were completed by April 6th, when

the line reached Hudson Bay and was found to be within sixteen feet of the monument established in 1929.²³

However, it must not be supposed from this account that modern mechanized equipment has taken all the hardship and adventure out of survey work. This is proved by a description given by John G. Pierce, also in *Sylva* magazine, of the trials encountered by a team that, in mid-winter 1952, surveyed a line through the bush to establish part of the boundary between the Districts of Thunder Bay and Cochrane, on a meridian of approximately $86^{\circ} 33'$. The team took $2\frac{1}{2}$ months in late winter to complete its task.

"Under the conditions met with," writes Pierce, "this survey was a real 'toughy'. As a base line for aerial photographic survey purposes, the line must be readily visible from 8,000 feet up . . . It has to be cut 6 to 8 feet wide . . . Every tree cleared from the line was cut off close to the ground, which meant clearing away snow three to five feet deep."

The equipment included two motor toboggans, designed to tow ordinary toboggans at a speed of up to fifteen miles an hour on packed snow; also two pack tractors that were satisfactory on ice or firm snow, but lost traction in deep snow. In a temperature of 20° below, the toboggan motors broke down and had to be pulled along by human "dogteams". From then on the only means of ground transportation were ordinary eight-foot toboggans, which often skidded and jammed in the snow banks, and six-foot sleds. Throughout most of the survey two Beaver aircraft were in use; but in some places no suitable landing-ground could be found. When this occurred, a helicopter was pressed into service, capable of carrying five hundred pounds weight. It would descend and "float" at snow level, enabling a passenger to jump out and trample down a twenty-foot area in the snow, felling any dangerous trees and laying down a few poles for the helicopter's skis to rest on. Meanwhile the 'copter would hover overhead for some fifteen minutes, then settle down on the hardened snow space and take up or deposit its loads. Two shifts of camp and equipment could be effected by this means in seven and a half air hours. Once the helicopter's heating system froze and it was necessary to interrupt its service until a rise of temperature occurred.

To maintain vital communications, the survey party carried a portable battery-operated walkie-talkie and a large transceiver

which derived its power from a 550-watt gas-engine-driven generator. Both of these were seriously affected at times by weather conditions. "Production" of the line was accomplished by back-sighting as far down the line as possible, transiting the telescope and lining in the 'split-line' picket at the forward station. Repeated six times or more if necessary, this operation secured good productions. When the operation was completed a new back sight was erected and the transit moved forward to a new station. In this way sixty-eight stations were occupied, the average production being three quarters of a mile.

Altogether some eighty-five observations for azimuth on the North Star were taken; these controlled the planting of twenty-eight brass-capped metal posts placed approximately two miles apart. Heavy snows fell almost daily, necessitating much arduous trail-breaking and digging to provide solid bases for the transits. The team lived in canvas sleeping tents with detachable double walls, which added comfort under normal circumstances, but let in melting snow when the temperature rose to 10° above zero – to the great discomfort of the occupants.²⁴

The lesson to be drawn from these experiences was, according to Pierce, that the great bulk of equipment carried made good transportation essential and that progress could only be made, particularly in muskeg country, if this factor was adequately handled.

6

THE PROGRESS AND REGULATION OF LAND SETTLEMENT



When the smoke of the Durham Report had cleared away, and the Union of the Two Canadas was an accomplished fact, it was time to consolidate the new policy of land settlement based on the ideas of Gibbon Wakefield and embodied in the Lands Act of 1837. That Act provided that all land was henceforth to be sold at auction to the highest bidder, subject to an upset price fixed by the Governor. There were to be no more free grants of land, outside of Loyalist and military obligations already incurred. The Act was based on Wakefield's conviction that any man who was willing to pay a good price for his land would be likely also to have enough incentive to develop it. Therefore no settlement duties were to be required of the purchaser.

However, the Government had to face several awkward facts about the current land situation. First, by 1840 much of the good farming land in Southern Ontario, except what was reserved for the clergy and the schools, (according to the Durham Report) had been wastefully given away to persons who too often made poor use of it, or sold it to land speculators. Second, the tide of land-hungry emigrants from Britain was flowing faster than ever across the Atlantic, stimulated by the provision of "assisted passages"; and everything possible had to be done to attract these people to settle in Canada rather than in the United States. To achieve this, the Government needed both more land and more revenue.

In theory both needs could be met by selling, instead of giving away, the land and by profitably disposing of the timber on the land before it was cleared and settled. In practice, however, this was not easy to do. The Commissioner of Crown Lands found that he had to sell the public lands (including the Clergy Reserves) in competition with better lands that the Crown had already parted with to private purchasers, for resale to settlers. And the settlers themselves, when they bought land which they had to clear for themselves, seemed to think that they ought to have the right to cut down and sell any timber they found on it. Here they ran up against the Government's reservation* of the most valuable (i.e. pine) timber; and against the lumberman's anxiety to keep lumbering and settling strictly apart, and his resentment of any encroachment by settlers on his limits. The Government therefore found itself caught in a squeeze between the contradictory motives behind its own policy, between selling land for revenue and selling it for settlement. It constantly tried to effect a compromise between these two; but revenue considerations seemed always to gain the upper hand, because land was so cheap and plentiful and no other means of raising revenue could so easily be found.¹ The two contradictory motives continued to confuse Ontario Land policy for the rest of the nineteenth century.

In 1841, when the Act of 1837 was only four years old, a first attempt to modify it was made. Wakefield's theories were still influential, but were now being moulded into a practical pattern more suited to Ontario conditions. Under the Act of 1841, the

*The last reservations of this kind were not removed until the 1940's.



LAND DISPOSITION BY STATUTE AUTHORITY

Governor General in Council was to fix the price of all public land offered for sale; an Order in Council dated August 17th, 1842, set this at eight shillings (provincial currency) per acre except for those areas set aside for special purposes. Henceforth a buyer was not required to pay for his land in cash, but could pay by instalments. But lands whose purchasers fell into arrears with their instalments or defaulted on their settlement duties, were to be forfeited and resold.

The most important provisions were those dealing with free grants. The Crown was to review all previous allowances of free grants and commute them for land scrip, that could be used instead of cash for buying any Crown Lands not set aside for specific purposes.² After January 1st, 1843, no new claims for free grants were

LEGEND

UNIVERSITY LANDS



SALES LANDS



FREE GRANT LANDS 1868 - 1878



FREE GRANT LANDS 1878 - 1888



SOLDIER'S SETTLEMENT LANDS



FREE GRANT LANDS 1888 - 1898



FREE GRANT LANDS 1898 - 1908



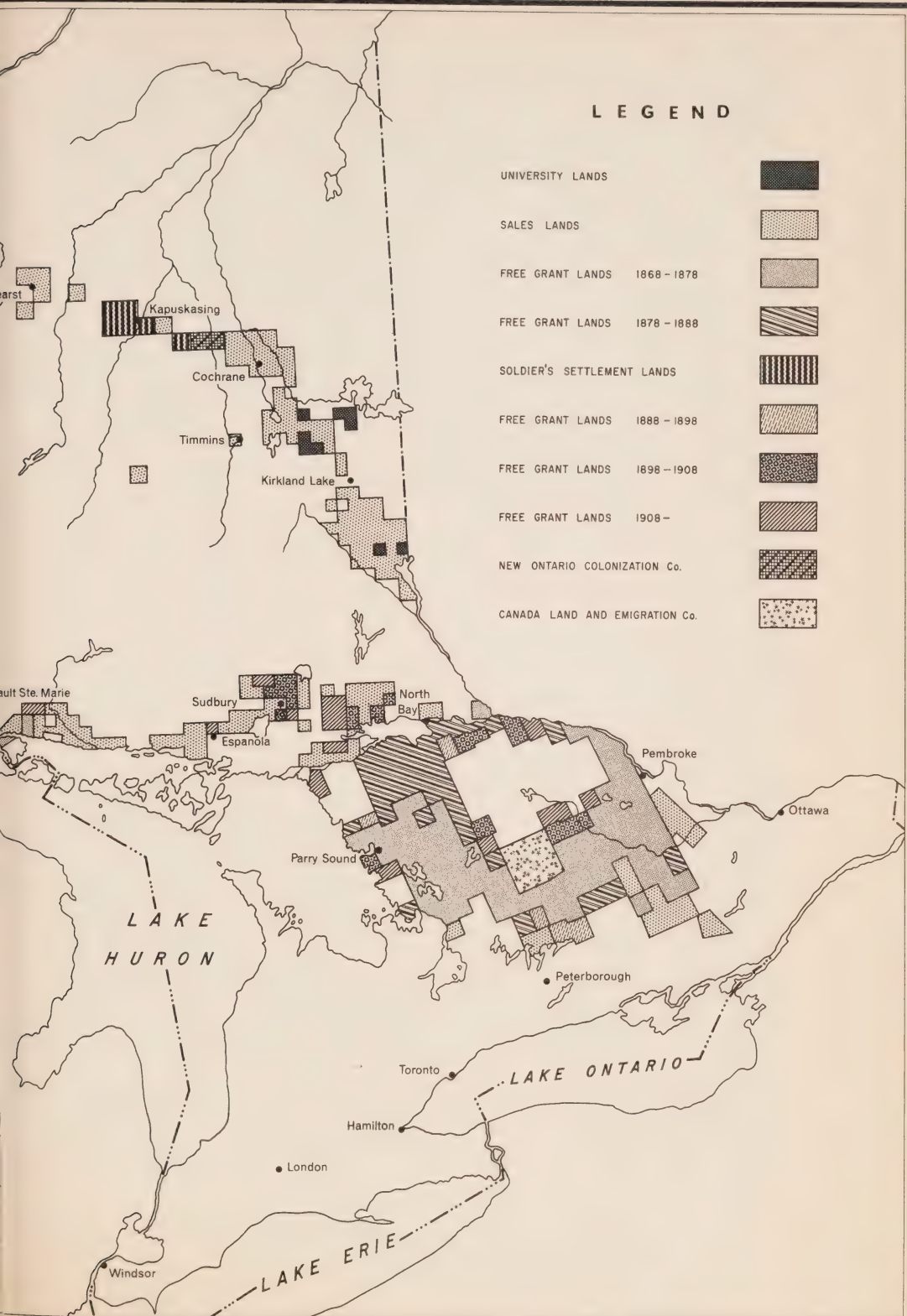
FREE GRANT LANDS 1908 -



NEW ONTARIO COLONIZATION Co.



CANADA LAND AND EMIGRATION Co.



to be entertained under old regulations or Orders in Council. But the Act did contain one slight but important departure from strict Wakefieldian principles. Any British subject claiming to be a *bona fide* settler could apply for a free grant of from fifty to one hundred acres either along a government road or in a new settlement. Almost in anticipation of this free grant provision, the Governor of Canada, Poulett Thompson, in June 1840 had made provision for fifty-acre free grants on land bordering a road to be run to Owen Sound in the Bruce Peninsula, on condition that the grantees performed certain specified road and settlement duties.³ This hasty action was due partly to the large influx of immigrants expected during 1841, and to the fear that if no free land were available, they would be attracted to go south of the border, where land was available for sale at a fixed cheap price.⁴

Between 1841 and Confederation various further land acts were passed, offering more inducements to the *bona fide* settler. Thus, an Act of 1850 appropriated for sale a million acres of public land, to provide an income for support of common schools. Two years later, when money was scarce, a credit system was instituted to help settlers meet their financial obligations. And in 1854, the Canadian Parliament secularised the Clergy Reserves, and began to enact ways of using for public improvement purposes the funds so released. At the same time the Imperial Government in London gave up its supreme power over land policies in Canada by passing an Act of Parliament which annulled the British right to withhold approval of Canadian land bills.⁵

Before the new system of land grants had been long in operation, it became infected with the old-time administrative evil of land speculation.⁶ A whole class of people lived on the business of making profits out of land settlement. Working within the provisions of the Public Lands Act, which was intended to protect the small settler from exploitation, the speculator by hook or by crook absorbed as much public land as he could get his hands on. To do this, he had to play on the weaknesses first of the settler himself, and second of the officials who administered the Lands Acts.

Since much of the good accessible land was already taken, the would-be settler was easily tempted into dealing with a land-jobber or speculator, who promised to find him a good piece not located on some inaccessible Crown land. The speculator prided himself on

DEPARTMENT OF CROWN LANDS PROVINCE OF ONTARIO	CROWN LAND AGENCY	
	Plevna, Jan 26 th 1890	
	This is to Certify that I have this day located <u>Frances Blackley</u> for Lots Number <u>28 and 30</u> in the <u>9th</u> Concession, in the Township of <u>Denbigh</u>	
	under the Free Grant and Homestead Act, and the regula- tions made thereunto	
	<i>Crowood</i> CROWN LAND AGENT.	

Settler's location ticket under Free Grant and Homesteads Act, 1868



A pioneer's first home

knowing where the best lands were to be had, and on shortening the lengthy process of obtaining a title-deed. Frequently there was collusion between the speculator and the local land agents of the Crown. The land agents, of course, knew from experience where the best available lots were to be found and, for a price, would allow speculators to have access to the survey records dealing with relevant parcels. As late as 1854 more than half of the land in Simcoe County was still owned by speculators; at the same time the Canada Company was keeping some of its land off the market in hopes of securing higher prices. As one observer noted,

there was a regular system of speculation in Crown Lands. Many persons paid only one instalment, paid no taxes and held the lands at high prices. This resulted in transferring almost every vacant lot in the country from the Crown to private individuals, thus driving away actual settlers.⁷

It was not easy to bring such speculation under control; but the Lands Act of 1859, requiring proof of residence and cultivation of the land before a patent could be issued, was a step in the right direction. This Act certainly helped to discourage speculation; but a more promising remedy for the evil was to open up new areas for settlement. The two most effective methods of doing this were the building of colonisation roads, and the extension of the land agency system.

In November 1852, William Lyon Mackenzie introduced in the Legislative Assembly a resolution calling for a survey of the tract of land between Lake Huron and the Ottawa River. Next year the legislature passed the Public Lands Act of 1853 empowering the Government "to appropriate as free grants any Public Lands in this province to actual settlers, upon or in the vicinity of any Public Roads in any new settlements which shall or may be opened through the Lands of the Crown." The Act also set up a Colonisation Fund, out of which thirty thousand dollars were earmarked for roads and land grants in Upper Canada. The colonisation roads were intended to be links between the well-settled lake front areas and the forested interior of the Province. They were to help settlers move to districts where new lands were waiting for them, and to service those lands. The term "colonisation roads" strictly speaking applied to

those roads that were built during the fifteen years preceding Confederation, in the area between Lake Simcoe and the Ottawa Valley, known as the Ottawa-Huron Tract. Between 1853 and 1860, four hundred and eighty-one miles of such roads were built in Upper Canada.⁸

Originally, the colonisation roads in the Ottawa-Huron Tract were intended for winter sleigh-driving only; but as settlement progressed they were reconstructed for all-year-round use. They were planned on a grid system, with three main routes running north and south – the Hastings, Addington and Frontenac roads – and three running East and West – the Opeongo, Peterson and Mississippi roads.⁹ From these main roads, secondary access routes were built to open up the intervening country.*

The free grants were laid out on each side of the roads and had “generally a frontage thereon of twenty chains.” The location and size of the farms were so planned as to keep neighbours reasonably close to one another. Poorer settlers found the roads a boon, since the land beside them was reasonably cheap and they ensured a line of communication with the more settled areas. Lumbermen, however, were of two minds. On the one hand, the roads provided them with better facilities for moving lumber from forest to market. On the other hand, the encroachment of settlers meant that, sooner or later, the land would be lost to the lumbering industry. To administer the colonisation roads, the Government appointed road agents, charged with allotting land, assisting settlers and inspecting the progress of their settlement. At first these agents were paid on a daily basis; later they received a fee from each locatee, plus a daily travel allowance from the Department.

To promote the use of the roads, the Government issued a pamphlet with a map, and a list of free hundred-acre grants already made to settlers. It also sent out agents, armed with these pamphlets, to travel as far afield as Britain and the Continent of Europe, in search of new settlers.¹⁰ However, all these propaganda efforts bore little fruit. They failed to attract European settlers to the Ottawa-Huron Tract, because of the lure of land in the American West, where no trees had to be cut down before cultivation could start.

*J. W. Kenan and G. A. Hills, *Land Use Plan for the Tweed Forest District*. Department of Lands and Forests. 1964, Page 16.

Also there was a constant struggle between the settler and the lumberman, which was reflected in the rivalry between the Woods and Forests and Colonisation Roads branches (especially after 1862, when the latter became formally a part of the Crown Lands Department). Another factor that complicated the problem was the ever-present difficulty of obtaining adequate land surveys.

Yet in spite of all these drawbacks the reports of the road agents were, at the outset, decidedly optimistic perhaps because their livelihood depended on presenting a bright picture. Throughout the 1850's a confident belief prevailed that the country of the Pre-Cambrian Shield harboured large areas of land suitable for settlement. In 1855 a Select Committee on Management of Public Lands was set up to study the question whether the Ottawa-Huron Tract should be opened up for settlement. Next year Crown Lands Commissioner Vankoughnet, entirely on his own responsibility, committed his administration to the policy of settling the region by free grants along colonisation roads. In doing so he declared that the ready market for settlers' produce in the lumber camps made it the most advantageous district for colonisation that the Government had at its disposal.¹¹ To promote rapid development of the area, he began offering whole townships for sale "en bloc" at fifty cents per acre.

This was of special interest to Toronto lawyer John Beverley Robinson, son of the Chief Justice of Upper Canada, and to his English friends. They formed a company to take advantage of Vankoughnet's offer and act as the agent of the Government for land selling purposes. The Canada Land and Emigration Company was incorporated in 1861, and the Province in turn sold it ten townships in the Haliburton area, covering three hundred and sixty-two thousand, one hundred and twenty-five acres of land. The agreement between them stated that any land not settled within fifteen years would be forfeited. The Company then offered its lands for sale at prices ranging from one dollar to one dollar and a half per acre, according to its location. But no sooner had this plan begun to operate, than the Government struck at its very foundation by offering free grant land in the same district. By 1871 the Company's land sales had amounted to only sixteen thousand one hundred and fifty acres; and from this bad start it never recovered.¹² In fact, the days of the large private land company in the Province were now numbered.

Even before this time a truer version of the overall picture had been presented by the Select Committee of 1863 on the State of the Lumber Trade, which reported that "settlement has been unreasonably pushed in some localities quite unfit to become the permanent residence of an agricultural population. Especially has this been the case of some of the Free Grant roads and adjacent country between the waters of the Ottawa and Lake Ontario. Your Committee would . . . recommend that the government should, in all cases, ascertain positively the character of the country before throwing open any tract of land for settlement."¹³ Clearly then, the colonisation road plan was doomed to failure. By 1863 most of the settlers were leaving the land, and no replacements were coming in; the roads themselves were falling into disrepair. But at least the Ottawa-Huron country had been opened up, and somehow a handful of settlers succeeded one way or another in surviving on the land and even, in a few cases, prospering.¹⁴

During this period, the chief burden of carrying out the Department's land policies fell on the local Crown Lands agents who, in 1856, numbered thirty-three in Upper Canada. Crown Lands Commissioner Joseph Cauchon, in his Annual Report for that year, complained that their number was too large and should be reduced.¹⁵ They were paid not a salary, but a commission on their sales; hence in order to make ends meet, they were liable to fall an easy prey to speculators' money. Many of the agencies were too small for economic operation, having a responsibility for only two or three townships. The agents tended to neglect or delay those parts of their duties that had no bearing on their commission, such as the collection of evidence in cases of dispute, or the problems created by squatters. On the other hand, administrative control over them from head office in Toronto was weak and slipshod, and many local agents interpreted governmental regulations as they saw fit. Often they failed to report their sales and put the cash received from them into their own pockets.

Cauchon's proposed remedy for this was to replace the local land agents with six or eight travelling agents, who would be paid a fixed salary and would move around among the areas they visited. However, he wanted to keep the colonisation road agents, because "the scene of their labours are in remote parts . . . and therefore, could not be visited sufficiently often . . . without wasting too much time." Little came of his plan except a reduction of the number of Crown

Lands agents to nineteen by 1867, as a result mainly of the closing of some agencies in the older south-west portions of the Province. At departmental headquarters itself, the staff was divided into two branches employing roughly equal personnel, one dealing with land sales and the other with land claims.

How did the average Crown Lands agent spend his time? We can get a fair idea of this by examining the work of one typical agency, that of Simcoe County where J. A. Alexander served as land agent for over twenty-five years, beginning in 1843.¹⁶ Like all his colleagues, Alexander was appointed by Order in Council, and owed his job mainly to political considerations. His duties consisted of selling land, collecting instalments on land purchases and performing other special duties as required by the Department. To ensure his financial probity, he had to provide bailmen who, in effect, bonded him. He had to deposit all moneys he received in the local bank, and send in a monthly statement to head office showing the number of sales, the cash realised from them and his expenses. Among his other duties were, keeping the Department informed about settlers' progress leading to the issuance of patents for their land; and protecting the unsold Crown Lands in his district against trespassers and squatters.

The agent was paid on an annual commission basis, i.e. 5% on the first five hundred pounds of his sales, 2½% on the next seven thousand pounds, and 1¼% on everything above this figure. This scale of commission was set to ensure rapid sales of land on a cash basis: but by 1866 the Department was laying more emphasis on encouraging settlement than on increasing revenue, and purchase by instalments had become the regular policy. On December 4th of that year an Order in Council changed the commission rates to 10% on the first one thousand dollars, 5% on the next nine thousand dollars and 2½% on all moneys above ten thousand dollars collected during the year.

Naturally, Alexander conducted a considerable correspondence. During one short period he wrote 110 letters in the time he could spare from his other duties, such as making tours of inspection and interviewing callers in his office. He received many letters and circulars from head office in Toronto, which he was expected to read, answer or enforce as circumstances required. Among these were letters giving approval to specific sales of properties to persons who occupied land, whether cleared or not, and wanted to buy it. Such

approval would be forthcoming only after the land records at head office had been checked to make sure there were no other claims to its ownership. Other letters brought requests from head office to obtain valuations of land and buildings from sellers in order to determine their price; requests for the valuation of uncleared lands; and requests to give reasons why certain lands on the market were not being sold.

Alexander's replies to queries of this sort indicate that he based his valuations partly on site inspections, and partly on information gleaned from other residents in the area. Sometimes he had to deal with cases where patents had been issued on the wrong property. Usually he would excuse this on the ground that he had been misdirected when looking for the property, or that it was due to a clerical error. Often he was called upon to provide statistical information for departmental officials, such as the head surveyor, who were about to visit his office.

Besides this routine correspondence, Alexander kept himself busy protecting his 'empire' and the security of his own income. In 1844, his office was moved from Bradford to Barrie; at which time he complained that his commissions were too small to support him while maintaining an office at his own expense. A few years later we find him protesting against a proposal by R. J. Oliver, the Crown Lands agent for Muskoka Road, for the establishment of a new agency at Orillia.

"I would respectfully request", he writes to the Department, "that my agency be not curtailed now after seventeen years, but rather increased, as I have a large family to support, and as you are aware that Mr. Oliver has been recently appointed and that his salary is much more than mine."¹⁷ Alexander's plea was overruled, and the new agency duly established at Orillia. All he could do was to request, in 1867, an expression of confidence from his employers in Toronto after his twenty-five years of service. He continued his fight to retain outlying areas in Manitoulin Island and Parry Sound in his agency rather than cede them to Orillia. Again and again, too, he felt it necessary to rebut charges of favouritism or indiscretion made against him by local critics, and to emphasize his own resistance to speculators and his care for the interests of *bona fide* settlers.¹⁸ All of which adds up to proof of the busy and varied life of a Crown Lands agent in those days.

Another problem of continuous concern to Crown Lands officials

was squatting. Poor communications and absence of administrative co-ordination made it easy for people to settle on lands without paying for them. Often, as in the Ottawa-Huron Tract, the squatters were not genuine settlers at all, but occupied land only in order to remove the timber.¹⁹ In 1852, the Department sought to discriminate in favour of "genuine" squatters by offering them the first chance to buy their land, on instalments. Later, a Legislative Committee on the Management of Public Lands recommended that enough of the purchase money be paid to discourage timber plundering.

In 1858 the Department gave notice that in future there would be no more *de facto* recognition of unauthorized occupation of land. This was supposed to put an end to squatting; but in the very next year the Department issued a circular reminding squatters they could only acquire a title to public lands by purchasing it from the Crown. No doubt the policy of free grants helped "agricultural squatters" in many instances; "timber squatters" too availed themselves of the free grant system to skip from one lot to another under cover of fictitious names. Eventually however the northward flow of settlement tended to catch up with the squatters, first in Muskoka, then in Nipissing and much later in "New Ontario" in the North. When railways came to be built, the squatter's clearing was sometimes found lying in the path of the proposed right of way. He would then appeal for protection to his local MPP to "protect his interests", as a small man fighting against the tyranny of railway companies and government combined. However, in general, the coming of the railway discouraged squatting—especially timber squatting. It destroyed the squatter's sheltered position as a useful supernumerary in logging operations, by helping to take wood out of areas previously served only by him. Yet, even in the 20th century, human nature being what it is, squatters continue to harass government officials. As late as 1916 they are mentioned in a circular issued by the Minister of Lands, Forests and Mines, which once more emphasizes the need to get "deserving squatters", (i.e. those who have made improvements) to acquire title to their land, under the prescribed conditions.²⁰

Soon after Confederation a new land policy came into effect. The Ontario Government, still anxious to take more advantage of the continuing influx of British immigrants, passed the Free Grant and

Homesteads Act of 1868. This Act gave the Government power to appropriate lands not valuable for pine timber or minerals for the purpose of making free grants to intending settlers in the districts of Algoma, Thunder Bay, Rainy River, Nipissing and the townships of the Ottawa-Huron Tract. Such grants, of up to two hundred acres each, were to be made to heads of families with children (two hundred acres), or to childless couples (one hundred acres). The patents were not to issue until five years had expired; and even then not unless the occupiers had resided on the lots for the whole period, had put fifteen acres of land under cultivation, and had erected thereon a dwelling measuring sixteen by twenty feet. If these terms were not fulfilled, the grant would be annulled. Pine trees and minerals were reserved to the Crown, but the settler could cut any trees necessary for fuel, building, and clearing and fencing his land. Until 1880 all trees remaining after the patent was issued became the property of the locatee; but in that year the Act was amended to continue the reservation of pine timber to the Crown, subject to payment to the locatee of part of any dues levied by the Crown. Regulations made under the Act allowed settlers extra land to compensate them for rock, lakes and swamps on their original grant. It also allowed them to buy an extra hundred acres at fifty cents per acre, subject to the usual settlement conditions other than building.

The Free Grant and Homesteads Act was intended to counteract the American Homesteads Act, and to attract British settlers to Ontario. Both Acts were based on the same principle, the so-called "agrarian myth" of history, according to which the more farmers a country had, the stronger it would be, since such "hardy pioneers" were the natural backbone of any growing nation. All the literature of the time, including that issued by the Government itself, emphasized this aspect and called for the encouragement of settlers of this type. Yet, although Ontario needed these people so badly in order to lay the foundation of a better future society, the Government was never quite whole hearted about the matter. The old rivalry between the lumberman and the settler was not yet extinct. The powerful timber interests of the Province would not consent to the passing of the Act until they had been assured of a compromise that would protect their future timber rights, as well as the Government's own potential reserves of timber and minerals, from possible loss.²¹ The same Act adversely affected the recent land purchases of the Canada

Land & Emigration Company, which found that much of the new free grant land opened up by the Government was located near the Company's lands, and was moreover more accessible to settlers.

Under the Act of 1868, all lands in newly opened townships were reserved and not put on the open market for sale. When an area had been surveyed, and reports indicated that the land was fit for agriculture, a decision was taken whether or not it should be given free grant status and appropriated for this purpose. The very fact, therefore, of being placed on the free grant list, was likely to induce settlement there, especially if a railway line passed through the township. Obtaining a free grant was a simple procedure. A person filed his formal application with the Crown Land agent in the area of his desired location, together with the necessary affidavits and documents. The location was then checked to see if there had been any previous claims.

Many of the townships originally selected for free grants were located in the Parry Sound, Muskoka and Haliburton districts. Other favoured areas were the northern parts of Hastings, Frontenac, Lennox and Addington counties, together with the western parts of Renfrew county. These areas completely surrounded the southern flank of the lands of the Canada Land & Emigration Company.

Later the system was extended northward to the borders of Lake Nipissing and the French River and thence on to districts around Sault Ste. Marie and Sudbury. At the same time, land was set aside in the Thunder Bay area; and soon afterwards townships began to be opened up in the Rainy River district. This district enjoyed a separate Lands Act of its own, passed in 1886. It enlarged the free grant limit to one hundred and sixty acres per head of family (one hundred and twenty for a childless male adult) and allowed both types to purchase an extra eighty acres at one dollar per acre. Furthermore, a Rainy River settler needed only to occupy his land for three years, instead of the standard five to get his patent.

In 1870-71 the Government tried an interesting experiment in the township of Ryerson. Making use of a provision in the newly passed Act "to encourage settlement in Free Grant Territory," it instructed the Department of Public Works to clear land and build a \$200 house (size 16' x 20') on free lots offered to genuine settlers. Later, the undertaking was transferred to the jurisdiction of the Crown

Lands Department. The so-called "Ryerson Scheme" represents one of the earliest of the Department's rare efforts to improve land before offering it for settlement.

In 1884 an Amending Act allowed any free grant settlers who wished to to sell out and relocate elsewhere on free grant land. The aim here was to entice the pioneering type on to new lands where settlement and cultivation were badly needed.

Was the free grant system a success? Certainly the number of acres located for the purpose rose steadily from 46,336 in 1868 to a peak of 274,238 in 1878.²² But those high-water marks were not again reached until well on in the next century. In the long run, therefore, the system cannot be pronounced a success. True, it helped to speed up settlement in certain areas, notably Thunder Bay and Rainy River, where it would otherwise have lagged behind. Moreover some areas of the Province were settled by national groups (for example, Poles in the Barry's Bay - Killaloe region of Renfrew County) who made at least a living from farming on land that would otherwise have remained virgin. But these gains were offset by serious failures. In those days no thought was given to planning the use of land in accordance with its capabilities for different purposes. Instead, many grants were made on lands which were largely unsuitable for farming. Moreover the grants made were generally too small to enable the would-be farmer to "make a go of it." In addition, many free grant districts were too far away from the settled areas of southern Ontario, and therefore from the main markets for farm produce. Transporting foodstuffs out of the free grant areas remained costly, while similar foodstuffs could be brought into the new areas at prices which undercut the local farmers.

Furthermore, the free grant system was developed at a period when immigrants were in universal demand by various local and national governments. The immigrant consequently had his choice of what he considered the best available land. Free land therefore did not always attract the best type of farmer. It tended rather to attract an inferior type, preoccupied mainly with clinging to his holding with the least possible expenditure of effort compatible with the rules. Instead of devoting all his time to farming, he spent the major part of his energies on non-farming activities, such as casual bush-cutting. If his grant was cancelled because of nonfulfilment of his

settlement duties, all he had to do was move away to a fresh district and repeat his settlement on another piece of free land. This type of settler was close to becoming a squatter.

Unfortunately, too, one Government Department (Agriculture) had charge of promoting immigration, while another (Crown Lands) was concerned with land settlement. This fact produced frequent divergences of administrative interpretations of policy.²³ Meanwhile a third party, the lumbermen, continued to demonstrate their interest in protecting as much land as possible for forest purposes. Only three years after Muskoka had been thrown open under the Free Grants Act, the Commissioner of Crown Lands recommended selling off all remaining unsold lands there as timber limits in berths not exceeding twenty miles square. Again, in 1881 the Royal Commission on Agricultural Resources strongly urged that more attention should be paid to "the preservation of the more valuable hardwoods of our still remaining Crown Lands" in the Muskoka and Parry Sound districts.²⁴ Clearly, the antithesis between the claims of forestry and farming remained basic.

While the main emphasis of land settlement in this era lay on free grants, the other side of land policy – land sales – was not ignored. Some Crown Lands agents concerned with free grants also sold land. With a few administrative changes, the Lands Acts of 1853 and 1859 continued in force. Most lands offered for sale (at prices varying from fifty cents to two dollars per acre) were to be found on the north channel of Georgian Bay or the north shore of Lake Nipissing, generally near projected railway lines. Sales were also made in the better areas of the free-grant counties of Renfrew, Frontenac and Hastings.

Throughout this period the Department continued to issue scores of pamphlets on the glories of settling in Ontario. For example, the Department's Annual Reports abound in colorful eulogies, such as this in 1898:

The immense heritage of the Province in its Crown Lands is scarcely realised by the general public.²⁵ . . . This ought not to be so, if our people would bear in mind that Ontario has plenty of good land available at prices much below what they will have to pay in the North-West; that these lands are easy of access and close to their old homes, with better markets for everything they can grow; that they

are easily cleared, and that the timber which will have to be removed is saleable almost everywhere, the proceeds of which will assist in tiding over the early pioneer period. They have, too, an unlimited supply of fuel for the mere taking of it, and plenty of pure water on almost every lot, and there are other advantages incident to living in a wooded country which need not be dwelt upon.²⁶

To these Crown Lands officials, wooded country was unquestionably the best, since land that grew trees had proved it could also support agriculture. They hankered nostalgically for settlers of the old pioneer type, and could not understand why modern (Central European) immigrants seemed to prefer the flat prairie lands. Admittedly, they argued, it might take a bit more work to clear Ontario land, yet surely there were still enough "chips off the old block" remaining to attempt the task!

One other type of land policy remains to be considered: the lands associated with the building of railways. In the United States, the Government gave land free as an inducement to railway building. In Ontario, the Province voted public money to the railway companies, payable as and when they completed constructing their track. To compensate for these monies, the Government set apart lands ten miles wide on each side of the railway line and offered them for sale at two dollars per acre, with the usual requirement of settlement duties. The Railway Act of 1889, for example, helped to finance the building of five railways (The Ontario and Rainy River, Manitoulin and West Shore, Parry Sound Colonisation, Nipissing and James Bay, and Brockville, Westport and Sault Ste. Marie Railways). Unfortunately, much of the land thus made available along the railways was located in areas where land had already been offered for sale, or put on the free grant list. The best of this land had already been settled, and only the culls were left, which were worthless. Although fifty-five townships had been set aside as railway lands, by 1895 few sales had been made at two dollars and the price soon fell to fifty cents an acre. At last the Department was forced to retreat to a new line of policy – that of *giving* the lands to the railway companies themselves.

Accordingly, during the 1890's and early 1900's the Government of Ontario made free grants to the Companies of alternate blocks of land along both sides of the railway right-of-way. However, these

grants only became effective as and when each ten-mile section of the line was completed. Grants of this kind were made to such companies as the Canada Central and the Temiskaming and Northern Ontario Railways.²⁷ Once the grants had been approved, it became the task of the Crown Lands Department to reserve them and ascertain whether the conditions for making the grants had been fulfilled. When this was done, the necessary Order in Council could be issued.²⁸

The Crown Lands Department's railway land policy can hardly be termed a success. The greatest number of acres sold was in 1890 – nine thousand four hundred and six for eighteen thousand five hundred and seventy-seven dollars. This amount fell far short of the kind of sum required by the Department to recoup its “donations” to the railway companies. After 1890, the acreage sold declined to a mere ninety-six and a half in 1897. In part this was due to the piece-meal system of selling in alternate blocks. This tied railway and departmental sales together and, in the numerous cases where the railways never did get built, left the Department “holding the bag”.

The administrative structure of the Crown Lands Department remained relatively unchanged from 1867 to the turn of the century. At first there were two branches concerned with land, Land Claims and Sales in Old Townships, and Sales of Clergy and School Lands and Crown Lands in New Townships. There was also a Colonisation Roads Branch, under a superintendent; and nineteen Crown Lands agents. In 1870 the branches were combined into one, covering Land Sales and Free Grants, under a Chief Clerk. The number of agents fluctuated considerably, declining until 1879 and then increasing again to a total of twenty nine in 1900. In 1899 the Colonisation Roads Branch was placed under the new Bureau of Forestry, and for six years became closely concerned with immigration matters, before being finally transferred back to the Department of Agriculture in 1905.

THE DEPARTMENT TAKES SHAPE



The administrative scandals that had plagued the pre-1841 Crown Lands Department did not immediately disappear with the coming of responsible government. In fact, to judge from the evidence given before the Financial and Departmental Commission of 1862-1863, waste, incompetence and favouritism were still to be found more than twenty years after the union of the two Canadas.¹ This was largely due to the fact that the new department grew faster, in size and scope, than did the needed improvement in administrative technique.

From 1841 to 1867 the Crown Lands Department was the biggest and the most loosely knit of all the Government departments. Its functions were steadily enlarged until they covered the whole field

of natural resources, as then known. To begin with, between 1841 and 1845 it absorbed what was left of the former Surveyor General's office. Next, in 1852, to fill the place of the old Surveyor General of Woods and Forests, a new Woods and Forests Branch was created, to handle timber licenses and dues. Besides this, the Crown Lands Department took on additional responsibilities, for Mining Claims (1846), Fisheries (1857) and Indian Affairs (1860). At Confederation, the two latest additions were handed over to the new Federal Government, while the Province of Ontario took over the others.²

With this enlargement of its functions, came a doubling of the area of its jurisdiction. Territorially, the Crown Lands Department now embraced both French-speaking Lower Canada and English-speaking Upper Canada. The Department was unified only at the top. Throughout its lower levels, from the branches down, it was organized on a dual basis, with each branch (except Woods and Forests) divided into separate sections, one for Upper and one for Lower Canada.

At the head of the Department stood the Commissioner, a Minister of the Crown with a seat in the Legislature and membership in the Governor's Council, or Cabinet. The twenty-six years from 1841 to 1867 were a period of constant political flux, during which as many as sixteen commissioners held office.³ In most cases their tenure of the post was too short to enable them to pay much attention to administrative problems. Dr. John Rolph, who was Commissioner in 1852, was exceptional in devoting his time to analyzing the trade consequence of the rise in popularity of white pine as compared with red pine; and in devising improvements in the system of collecting dues on Crown timber at Bytown and Quebec.⁴ More usually, the Commissioners of this period remained content with the role of political chiefs and left their administrative functions largely in the hands of the various branch heads. Branch chiefs in fact usually acted on their own responsibility, and delegated what authority they pleased to local agents.⁵ This state of affairs was hardly conducive to improved standards of integrity, or to the building up of effective resistance to outside pressures.

Yet from 1841 onwards, under the impetus given by Lord Sydenham (Lord Durham's successor), Canada was moving steadily towards a system of responsible government that required each head of a department to become directly answerable to the Legislature



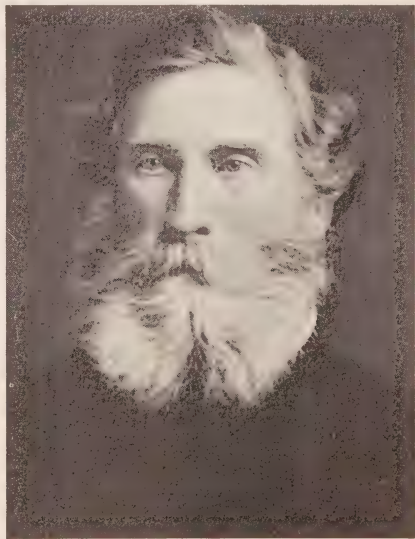
HON. DR. JOHN ROLPH, *Commissioner of Crown Lands, 1851-1853*



HON. PHILIP VANKOUGHNET, *Commissioner of Crown Lands 1858-1862, afterwards Chancellor of Upper Canada*



HON. STEPHEN RICHARDS, *Commissioner of Crown Lands, 1867-1871*

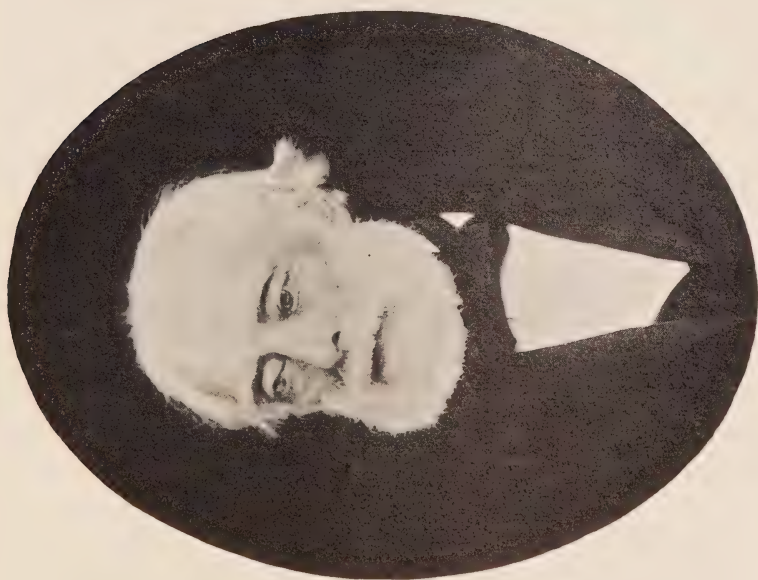


HON. SIR RICHARD W. SCOTT, *Commissioner of Crown Lands, 1871-1873*

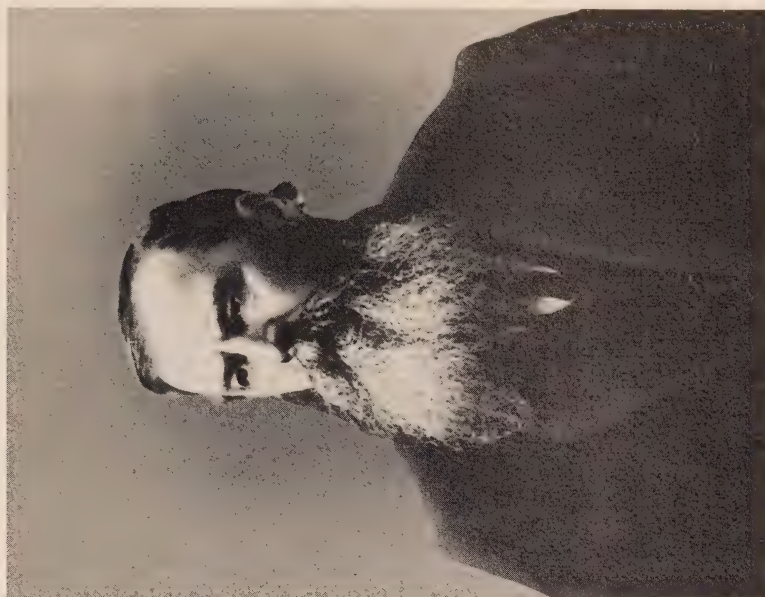
rather than to the Governor or his Council. This, of course, involved the bringing of all public money under Parliamentary control. Public accounts had now to be presented in an intelligible form to Members of Parliament, passed through the scrutiny of a committee and subsequently (from 1855 onwards) audited. At a later date (1864) annual estimates of expenditure had to be prepared and submitted to Parliament for checking before (and not merely after, as had formerly been the practice) the appropriation of funds for carrying them into effect.⁶

These improvements in constitutional procedure had to be carried out under the difficult conditions created by the system of alternating capitals. First Kingston and Montreal, then Toronto and Quebec, took turns at serving as seat of government. The periodical shifting, every fourth year, of four hundred civil servants, with their files and documents, must have seriously hampered continuity of policy and practice. Under these circumstances, much depended on the personality of the Commissioner. Was he absorbed in the intricacies of political manoeuvring, or had he the time to spare to improve the organization of his Department? During the first fourteen years after 1841 the evidence, either way, is meagre. But when in 1855 the Hon. Joseph Cauchon became Commissioner, the Crown Lands Department gained a chief who was both a keen administrator and an ambitious politician. Cauchon was a man of vision and imagination, with a special enthusiasm for the opening up of the Canadian west. In the early part of his career, he had made a name for himself in journalism, and was therefore expert in self-expression. When he entered politics his aggressive temperament and sharp tongue involved him in many controversies and frequent changes of office. He remained Commissioner of Crown Lands for only two years. But in that time he succeeded in impressing his personality on the Department, and in formulating constructive proposals for improving its operations. Unfortunately, he did not remain Commissioner for long enough to carry his administrative reforms into full effect.

On May 5th, 1856, the House of Commons adopted a resolution proposed by the Hon. A. T. Galt, calling for the printing of an Annual Report on the work of the Crown Lands Department.⁷ It was the first time such a request had been made; and in the following session the Commissioner responded to it by publishing a four-



ANDREW RUSSELL, O.L.S., *Assistant Commissioner
of Crown Lands, 1857-1869*



HON. JOSEPH CAUCHON, *Commissioner of Crown
Lands, 1855-57*

hundred page document which reviewed every aspect of the Department's work, and a good deal more. The main body of the Report consisted of three hundred pages of statistical returns; but this was prefaced by an eloquent manifesto on the future policy of the Crown Lands, together with a detailed criticism of the Department's administrative shortcomings and a statement of how he intended to correct them.

In compiling the policy sections of his Report, Cauchon seems to have had the help of a senior member of his staff, W. MacDonnell Dawson, who at that time headed the Woods and Forests Branch.⁸ Both men belonged to a group of Upper Canadians who were eager to challenge the declining monopoly of the Hudson's Bay Company and to push Canada's expansion westward into the Red River country and Rupertsland. Less than a year after the publication of Cauchon's Report, Dawson resigned from the Woods and Forests Service, in order to enter politics. In December, 1856, he was elected a Member of Parliament, where he continued his close association with his former chief.⁹

The Report of 1856, then, was not merely a survey of the work done by the Department. It was also an elaborate piece of political speculation, presented under the guise of an analysis of the prospects of land settlement. Cauchon began by reminding his readers that once the large tract of fertile country lying between Lakes Huron and Simcoe had been settled, the Government would have no further reserve of surveyed public land to offer would-be settlers in the southern portion of the Province. Therefore, he argued, the time was ripe for examining the prospects of settlement in the outlying areas.

After a cursory glance at the remaining available land for settlement in Lower Canada, Cauchon turned his attention to the seventy-seven thousand square miles of undeveloped territory lying between the Ottawa River and Georgian Bay.¹⁰ This comprised a huge hinterland of hardwood forest stretching south-west and west of the rich pineries of the Ottawa River Valley and of its Bonnechère and Madawaska tributaries, which were in the full heyday of exploitation by the lumberman. The axe and the saw were now biting deep into this new forest; and the available survey evidence suggested that, as fast as the timber was removed, substantial areas of arable land would be opened up. But since these arable areas

were widely scattered and isolated from one another, a bold new plan for settling them had been inaugurated in 1852. A network of colonisation roads was under construction, to cover the whole territory between Muskoka Falls and Pembroke. Settlers were being encouraged to come there, by the offer of special free grants of land along the roads. In fact, however, the chief users of the roads were lumbermen.

Beyond this district and to the northwest of it, lay the country bordering on Lake Nipissing, which Cauchon described as "unquestionably the best country for the growth of wheat still remaining unoccupied to the eastward of Lake Huron."¹¹ The fertility of this land was such that, after being cleared, it would ultimately justify the construction of a new railroad. This would encourage the building of sawmills, which in turn would cause an increase in the export of sawn lumber to the United States.

Passing further west to the section of the Province lying on the north shores of Lakes Huron and Superior, the Commissioner drew attention to the geological and land surveys, which indicated the existence of fertile valleys lying inland behind the rocky hills that bordered Lake Huron, and the north shore of Lake Superior. But "besides its land and timber, the characteristic resources of this territory are its mineral treasures and its fisheries."¹² The exploitation of the minerals had begun only since 1846. But the fisheries, especially the white fish and lake trout fisheries, had long been the chief commercial staple of the region. For future settlement purposes, therefore, the Huron-Superior territory had "almost all the advantages of a maritime country," with accessibility to growing American markets.¹³ It would come into its own when the navigation of the St. Lawrence had been improved to a point where direct steamship communication could be opened right to the heart of the Great Lakes – a possibility not realized until the opening of the Seaway a hundred years later.

So far Cauchon's account seemed to show that large areas of land fit for settlement still remained between the St. Lawrence Valley and the Great Lakes. But, he went on, "it must be admitted that they are not equal, in climate nor in general fitness for cultivation, to the western peninsula of Upper Canada, where the stock of Public Lands is now exhausted."¹⁴ He was therefore convinced that the lands he had described would not be enough to meet the demand

for farming land in the near future. "A great and increasing number of young men of the Province . . . prefer the easier livelihood that is to be earned by cultivating the prairies of the west, where the plough can be immediately used, and great crops be obtained with comparatively little labour."¹⁵

Now the secret was out. The elaborate survey of lands for future settlement resolved itself into a series of arguments for the immediate expansion of Canada into the west. Cauchon had his own ideas of how this expansion might take place. First, there would be detailed exploration of the country beyond Lake Superior. Second, a new railway would be constructed along the north shores of Lake Huron and Lake Ontario. Lastly, a new giant colonization road would be laid out, to run from Fort William to the Red River. From this point, Cauchon's imagination soared even further to picture the development of "a line of communication by land, or partly by water, to the Pacific."¹⁶ As a necessary preliminary to this, he advocated an investigation of the feasibility of using steamboat navigation on the Saskatchewan River.

During the two years following the issue of his Report, Cauchon and his friends made strenuous efforts to translate their political plans into reality. But they were frustrated by two factors; first, the resistance of the Hudson's Bay Company to the surrender of its territories; and second, the reluctance of the Imperial Government to endorse Federal Union, the only action that could have provided the then Canadian Government with the resources it required for taking over the west. As Alexander Galt, the Finance Minister, put it: "If the claims of Canada on the vast territories of the Red River and the Saskatchewan were conceded, we could not govern them by our Crown Lands Department."¹⁷

In the second part of his 1856 Report, Cauchon turned from politics to administration. He began with a candid review of the difficulties facing his Department in the sale and management of the Public Lands. The most urgent problem was the integrity and efficiency of the local Crown Lands agents (now numbering over seventy) upon which these sales depended. It had proved impossible, at a time when the Department's responsibilities for land and timber were being extended all the way from the Gaspé Peninsula to Sault Ste. Marie, to manage the business efficiently with only a headquarters staff, especially when that headquarters was being



A settler's hut on the Opeongo colonization road, Muskoka 1901

shifted periodically from one capital city to another. Therefore the Department had employed local lands agents to carry out its land sales policy, thirty-eight of them in Canada east, and thirty-three in Canada west. The scattered nature of the settlements and the poor communications between them had thrown on these agents the tasks of answering queries, settling disputes and collecting payments. But (as has been indicated in Chapter Six) they were inadequately supervised by headquarters; their methods of accounting were lax; and only too often disputes about land could not be settled because the Department could not rely on its officers on the spot. In short, said Cauchon, the whole system of local agencies was "based in error, and has been a fruitful source of confusion, antagonism and ill-feeling, as well as of undue speculation on a large scale."¹⁸

As examples of malpractice, he cited the activities of various local agents who had violated the intention of the Land Regulations of 1852. These Regulations had strictly limited sales of Crown land to persons who were actual settlers, and had offered them lands at a low price, payable in yearly instalments. Now with the connivance of dishonest agents, many speculators had been allowed to pass themselves or their clients off as *bona fide* settlers, in order to get hold of the lands illegally and through manipulation of the new credit machinery make large profits out of quick re-sales.

One way to check this kind of evil, Cauchon suggested, would be to tighten up the accounting system; another would be gradually to reduce the number of agents, by grouping them in circuits of Land Districts, supervised by travelling agents from headquarters. This, too, would reduce the risk of defalcations, which had become all too frequent. Here Cauchon might have given (but did not) as an example the notorious case of Thomas Baines, the local lands agent for Toronto, who in 1852 was found to have accumulated the huge sum of \$130,000 in his private bank account without being able to explain it.¹⁹

The Report next promised to protect genuine settlers from both trespassers and 'bogus settlers', whose real object was to get hold of their land solely for the sake of the timber on it. Such fictitious purchases were "injurious to the public interest, as well as to the lumberer working in good faith under license from the Crown."²⁰ Cauchon also undertook to safeguard lumbermen from losing their

rights over improvements (such as dams, slides and booms) that they had made on the streams included in their limits, when these lands came to be surveyed and sold for settlement.

Turning next to the Woods and Forests Branch, the Commissioner noted first that "there was perhaps no other Department of Government through which such persevering efforts have been made to secure special advantage to particular interests . . . It appears to have been the rule at one time to deal with special cases and the exception to govern by a general system based upon laws or regulations equally applicable to every case."²¹ The Department had tried in various ways to check the monopolistic practice of lumbermen holding in reserve huge tracts of territory on the limits assigned to them, without working them or paying for the privilege of keeping them unworked. In 1851 a way was apparently found to check this evil, by levying a small annual ground rent of two shillings and six pence (fifty cents) per square mile on all timber limits. To make sure that this would affect holders of extensive limits to whom such a low rent would hardly serve as a deterrent, the rent was made cumulative, i.e. doubling in each successive year on all unoccupied timber berths. This had the desired effect, so long as the timber trade remained in an active state. But in 1855 a severe depression set in; whereupon the lumbermen petitioned the Department to limit the amount of the cumulative ground rents, on the ground that these were forcing licensees to abandon their limits and go out of business. A concession was then made by the Commissioner, limiting the cumulative rent to the sum total of the normal ground rent plus the minimum dues that might be expected to be paid on the timber when it came to be cut.*

The lumbermen's petition, however, evoked a counter-petition from the lumber merchants of Quebec, whose interests lay in maintaining as large as possible a supply of cheap timber, to enable them to compete in the British market. They complained that the Commissioner was showing too much tenderness to the producers' monopolistic practices.

The Commissioner gave considerable space in his Report to his attempt to balance the conflicting points of view of the merchants and the producers.²² Taking his stand on the prevailing axiom that

*See also Chapter 8.

government 'interference' in trade should be kept to a minimum, he had worked out a three-fold policy of timber administration with the following aims: –

(a) Making the application of all government regulations uniform and consistent;

(b) Keeping Government's revenue from dues and rents at the highest possible level;

(c) Arbitrating between rival trade interests in such a way as to ensure reasonable continuance of prosperity to all parties.

On the immediate issue, the Commissioner granted the lumbermen's petition to the extent of limiting ground rents to an amount equal to the original ground rent plus minimum dues payable on the timber when cut.

Cauchon's statement showed that the policy of the Department had not yet progressed to the point of defining the public interest as something above and beyond the balance of private interests. Nor did it concern itself primarily with the welfare and protection of the forest itself, as a vital national resource belonging to the whole community. Dollars and cents were still the only criterion for measuring successful public administration.

However, it seems clear that, inside the Department, there were already some individuals – such as William Spragge in the Surveys Branch and A. J. Russell in the Ottawa Timber Agency – whose thinking had progressed beyond this criterion. In particular, there was one new field of natural resources – Fisheries – in which the Department's outlook was beginning to move away from *laissez-faire* commercialism.²³ After underlining in his Report the growing importance to Canada of her commercial fisheries, in lakes, rivers and the sea, Cauchon called attention to the alarming decline of the salmon fisheries of Lower Canada. "If measures be not taken . . . for its protection," he warned, "this valuable branch of fishery will come to an end." Furthermore, he declared, "for the preservation of our fisheries of every kind, it is desirable that . . . superintendence should be established and organized in such a manner as to ensure the law being carried into effect in all parts of the Province."²⁴

In the case of fisheries, unlike that of timber, no consideration of the need for Government revenue operated to restrict governmental interference on behalf of the public interest. For many years past there had been on the statute book laws asserting the principle of

conservation. For example, in Upper Canada, the Act of 1821 had established closed seasons to protect the spawning periods of game fish; and in Lower Canada the Act of 1843 gave similar protection to salmon, trout and muskellunge in certain districts.²⁵ Unfortunately, the administration of these laws had been left to local magistrates, with the result that they remained largely a dead letter.

Now, in 1857, Cauchon secured the passage through the Legislature of a new Fisheries Act which specifically prohibited harmful fishing practices, such as the use of certain types of nets and the destructive habit of spearing salmon by torchlight (common among Indians). More important, the Act required the Crown Lands Department to appoint, in each section of the Province, a fishing superintendent and fifteen overseers, who were to have full authority as magistrates to enforce the Statute by search and seizure. On the positive side, the Act also provided for the starting of fish hatcheries, to make good by artificial propagation the depletion of the fisheries. Richard Nettle, who was appointed superintendent for Lower Canada under the Act, was the first man to establish a fish hatchery, in a room adjacent to his office in the Crown Lands Office. The Fishery Act of 1857 then was the first practical piece of conservation legislation passed and enforced in Upper Canada.²⁶

In the final section of his Report, Cauchon took a candid look at the way his headquarters office was running. He had not been long in office, he said, before he had found there "a degree of irregularity . . . and practice . . . which greatly impaired the efficiency of the Department."²⁷ In the first place, the Commissioner had no real control over his subordinates, the Branch chiefs, "each of whom conducts the business of his own Branch according to his own views." Some branch chiefs even transacted business with the public independently of the Commissioner, and signed official documents without his knowledge. But they did not follow any common principle or maintain uniformity of practice. All important decisions fell into the hands of two or three individuals. They alone could speed up business; and what they failed to do, tended to get lost in a welter of delays and frustrations.

The worst aspect of the situation, observed Cauchon, was that any stranger who pleased could walk into the office at any time and talk to any employee he wanted. This practice often caused serious

delays of important business, because it encouraged the staff to undertake long and often futile searches on behalf of persons who were nothing but land speculators. During these searches valuable documents were often torn or damaged – sometimes even carried off altogether. On the other hand, applicants with legitimate enquiries or business with the office frequently found their correspondence lying unanswered, simply because they happened to live at a distance from Toronto.

Land speculators were indeed the curse of the office. They spent their time looking up old land claims and using the information to bully, cajole or deceive the rightful owners (chiefly recipients of free land grants) into parting with them for a song. “To remedy the irregularities which facilitated these abuses,” said Cauchon, “I found it necessary to take the business more immediately under my own control and direction than has hitherto been usual.”²⁸ He had ordered that all correspondence should pass under his personal scrutiny; that all callers should be limited to specific business; and that the branch chiefs should delegate work to their subordinates wherever possible, in order to speed up procedure. At the same time the office staff was to be more punctual in attendance and more assiduous in performing their duties. “The measures I have adopted,” he concluded, “are the result of mature consideration . . . From the nature of some of them a considerable length of time will be required before they can be carried into perfect operation, or their beneficial effects be fully developed.”

Joseph Cauchon signed his Report – the longest, most imaginative and most far-reaching of all nineteenth century Crown Lands Reports – on March 31st, 1857. Before that year was out he had left office, having fallen foul of his Cabinet colleagues over their refusal to support his ambitious railway schemes. His administrative reforms, therefore, were left to his successors to carry out. One of these, Philip Vankoughnet (who shared Cauchon’s enthusiasm for northwest expansion), held office for four years (1858-1862) and certainly strove to improve administration. He claimed, in his Report for 1861, to have had success in clearing off arrears of land claims that had been outstanding for twenty years.²⁹ He tried, unsuccessfully, to get a contributory pension fund for civil servants adopted by Parliament.³⁰ Also, he strengthened the regulations governing the conduct of the Crown Lands clerks. He forbade them

to indulge in such time-wasting activities as reading newspapers at their desks, smoking, engaging in casual conversation, making inter-office visits, and absenting themselves from work without leave.

All these measures, however, did not strike at the root of the trouble, which was that too much administrative responsibility was vested in the person of the Commissioner himself. Much as he might try to remedy abuses by centralizing all authority, the Commissioner still found himself distracted by his own political duties from giving the business of his Department the regular attention it needed. A more radical reform was required; and a way to this was opened up by a measure passed soon after Cauchon's retirement from office.

In 1857 a Civil Service Act³¹ was passed, directing each Government department to designate a permanent civil servant who was to bear the title of "Deputy Minister", and to have the duty of exercising "the oversight of the other officers . . . and the general control of the business of the Department."³² This measure was to lead, in time, to a separation of function between the political Minister, whose tenure of office was usually short, and his administrative Deputy, whose tenure was permanent. However, the separation was a novel idea at that time; and it took a number of years before it was translated into practice.

In the Crown Lands Department the Commissioner had had under him an Assistant Commissioner. His function was to oversee, not the operation of the Department as a whole, but only its operation in Lower Canada. In 1856 there was no assistant commissioner, and Cauchon took on his own shoulders the whole responsibility for policy and administration in both portions of Canada. But in 1857, when Hon. L. V. Sicotte had succeeded Cauchon, a new situation arose. Andrew Russell, a former head of the Surveys Branch, was appointed Assistant Commissioner. He served in this capacity until 1869, but he was never styled "Deputy Minister", although he performed some of the functions of that office. From the outset Russell interpreted his duties modestly. He did little more than oversee the clerks and other junior officers, and exercised control only over those portions of the Department's general business that the Commissioner did not choose to reserve to himself. He found that the various Branches (notably Surveys, Ordnance Lands and Indian Affairs), that prided themselves on their antecede-

ents as originally agencies of the Imperial Government, were not at all disposed to subordinate themselves to centralized administrative control. Nor was it easy for him to exercise control over the local land agents – still less, as Cauchon had desired, seriously to reduce their numbers. In 1861, indeed, the number of lands agents was reduced by twenty-two;³³ but thereafter it began to rise again. By the eve of Confederation there were sixty-nine officials at headquarters and two hundred and twenty-one departmental agents in the field, fifty-eight of them Crown Lands agents.³⁴

In 1862 Russell was summoned before the Royal Commission on Financial and Departmental Organization of that year, to explain the working of his Department. He was at that time questioned at some length about the “irregularities” that still continued to occur in agency accounts (for example, \$23,500 missing at Waterloo; \$2,700 at Goderich and \$18,360 at St. Maurice). The Assistant Commissioner could only deplore these black spots and point out that his “general control over the business of the Department did not include decisions on important cases involving the general policy of the Government,” e.g. in land claims.³⁵ In his report, the Financial Commissioner commented sarcastically on “the absence (in the Crown Lands Department) of that well-ordered distribution of labour and responsibility which an organization constructed with reference to ascertained wants might be expected to exhibit.”³⁶

These shortcomings continued to plague the unwieldy Department until 1867. Sir Alexander Campbell, the last Commissioner of Crown Lands for Upper and Lower Canada, complained strongly about the situation to the Governor-General, Lord Monck, in his Annual Report for 1865. “I have . . . to regret that the administration of the Department does not rest more with a permanent officer and less with its political head. It is not in the interest of the country that a Member of Government should have his time engrossed by the administration of his Department, to the comparative exclusion of the consideration of questions of public policy, and of the general government and legislation of the country; nor is it desirable that the practical administration of the Department should be subject to the vacillations and delays, and the lack of permanent policy and rules of decision, which the present system entails. Nothing but the expected Confederation of all the British North American Provinces has hindered me from submitting to Your Excellency a scheme

intended to remedy this evil and to provide for the more efficient discharge of the duties hitherto fulfilled by the Commissioner personally."³⁷

The complaint was forgotten in the general upheaval caused by the arrival of Confederation. Then the Commissioner's burden was lightened in two ways. First, responsibility for Fisheries, Ordnance Lands and Indian Affairs was transferred to the new federal Government by the British North America Act. Second, responsibility for Surveys, Crown Lands and Timber, which was assigned to the Provinces, was halved by the separation of Upper and Lower Canada. By 1869, when the sorting out had been completed, Ontario emerged with a Crown Lands Department of its own, whose headquarters staff numbered only thirty-six, while its field staff consisted of twenty-two lands agents and sixteen timber agents and their assistants. The latter number was further reduced by the discontinuance of the Western Timber agency in 1869 and the abolition of the Lower Ottawa agency in the following year.³⁸ The reduction of headquarters staff was accompanied by a number of severances which included the dismissal of one branch chief, the Superintendent of Woods and Forests. No successor to him was appointed, the duties being taken over by a senior clerk.³⁹

Following Confederation, for many a year nothing more was heard of the title "Deputy Minister" in connection with the Crown Lands Department. The Executive Council (or Cabinet) of Ontario was small and none of its members bore the title of Minister, until in 1876 the first Minister of Education was appointed. The Crown Lands remained in the care of a Commissioner; the first occupant of the post being the Hon. Stephen Richards, a member of the Sandfield Macdonald administration. His friends described him as "a man of high principle and good average ability", which was another way of saying that he was cautious and plodding. George Brown, his severest critic, allowed that though "slow, hesitating, hair-splitting and shabby . . . he works."⁴⁰

Richards had his hands full in carrying through a new piece of land settlement legislation, the Free Grant and Homesteads Act of 1868. The Act was intended to speed up the opening for settlement of a huge tract of territory lying between the Upper Ottawa River and Georgian Bay. It offered free grants of land to all settlers who undertook to locate in the Muskoka-Parry Sound districts. The

Government realized that it would have to incur an enormous expenditure of public money on providing the roads and public buildings that the new districts would require; but it confidently hoped to meet this expenditure out of the sale of timber, since the region was known to contain large quantities of white pine. Accordingly, the Act reserved from free grant locations all pine timber until such time as the settlers might be issued their patents; but the proviso was made that a settler might cut any wood, even pine, that he might need for the purpose of putting up his homestead, barn and fences.

Shortly after the passing of the Act, timber dues were substantially raised and new timber regulations were put into force, in anticipation of the expected sale by public auction of the timber limits in the Muskoka-Parry Sound area and along the north shore of Lake Huron, to clear the land for the expected settlers. Richards, however, was a cautious man and moved slowly towards the new development. He preferred first to boost the Province's revenue from timber dues; and he was proud to be able to point out, in his 1869 Report, that Ontario's forests were now yielding to the Government as much revenue as the whole of the forests of Upper and Lower Canada combined had yielded in the best pre-Confederation years. One of the factors contributing to the increase was a practice which Richards had encouraged, of employing, on a seasonal basis, travelling inspectors or "woods rangers" whose duties consisted of visiting the lumber camps and verifying the measurements of all timber cut there and the amounts of dues payable.⁴¹

In the same year, 1869, Assistant Commissioner Andrew Russell (sometimes, but inaccurately, referred to as the first "Deputy Minister" of Crown Lands) resigned. His successor, Thomas H. Johnson, was appointed from outside the existing ranks of the Department. He came from Prescott, which he had represented in Parliament from 1847 to 1854, as an Independent with reform leanings. He had also held a number of administrative posts, of which the most important was that of stipendiary magistrate for the District of Nipissing in northern Ontario. Entering the Crown Lands Department with this background, Johnson was able to discard the traditions which had hitherto limited the scope of his office, and so gradually to consolidate his authority as Assistant Commissioner.

In 1871, when Edward Blake took over the Premiership from

Sandfield Macdonald, he appointed a Roman Catholic lawyer, Richard (later Sir Richard) Scott, Commissioner of Crown Lands in place of Richards. To counter the criticism that Richards had been too slow-moving in opening up the new northern district, Scott at once embarked on a vigorous promotion of lumber sales in Muskoka and Parry Sound. In 1872 he ordered that no less than five thousand and thirty-one square miles of territory on the north shore of Lake Huron be sold by auction as timber berths. This was the largest timber auction that had ever taken place, and amounted to almost one-half of total timber sales made between 1867 and 1908. The 1872 sale brought in over half a million dollars to the Provincial treasury.⁴²

Unfortunately, the size and rapidity of the sale, combined with the fact that Scott, before he became Commissioner, had regularly acted as legal representative of the leading lumber companies, provoked a political uproar. During the spring and autumn of 1873, furious attacks were made by the Opposition in the Ontario Legislature, alleging that Scott was "the paid agent of the lumber interests",⁴³ and that the sales had been held without sufficient publicity and had resulted in a few big companies monopolizing five thousand square miles of timber. The Commissioner, it was said, without consulting Parliament had granted away, with a prodigal hand, the timber in unsurveyed districts; and had thereby sacrificed the long-term interests of the people of the Province as a whole to the short-term commercial advantages of a few wealthy merchants. For the first time in Ontario's history, the principle of "conservation"⁴⁴ was invoked, in protest against this policy. The critics, however, had no alternative to suggest, except that all timber on unsurveyed lands ought to be reserved from future sales.

Commissioner Scott found it easier to answer his critics than to silence them. He pointed out that, for years past, it had been impossible to sell land on the north shore of Lake Huron to settlers at even twenty cents an acre; that the existing timber stands there had been frequently raided by poachers from Michigan; and that they were in constant danger from fires. He argued, too, that the recent sales would lead to the building of more saw mills, which would bring about increased employment for the settlers, larger exports of lumber to the United States and more maritime traffic on the Upper Great Lakes. He calculated that the timber exports would

bring into Canada twelve million dollars in gold, and that the lumbermen would spend a like amount on purchases of food and other goods from the settlers.

These were sound arguments, but they fell on prejudiced ears. By actively opposing a current bill to incorporate the Orange Lodge of Ontario, Scott made himself a target for anti-Catholic feeling. Opposition critics, consequently, maintained their uproar against the timber sales until, in November, 1873, the disgusted Commissioner suddenly resigned his office to go to Ottawa and enter the Federal Cabinet. After his departure the new Liberal Premier, Sir Oliver Mowat, appointed to succeed him as Commissioner the most popular and smooth-mannered of his colleagues, Timothy Blair Pardee, the former Provincial Secretary. Pardee, whom *The Globe* later eulogized as "one of the ablest, shrewdest and most far-seeing public men who ever sat in the Legislature," held office for the unusually long term of sixteen years, during fourteen of which Thomas Johnson was his Assistant Commissioner. The two men worked well together and succeeded in keeping their Department out of serious controversy. In 1876 William McDougall, who had himself served as Commissioner for two years in pre-Confederation days, called for a select committee of enquiry into the administration.⁴⁵ But it turned out that he had nothing specific to complain about, except that the Crown Lands Office was now the smallest department of the Government, and therefore ought to cost less, or even be turned into "a mere accounting department". In reply, Pardee had no trouble in showing that the Department's revenue had gone up while its expenses had gone down, and that in 1875 it was yielding a net revenue of half a million dollars. McDougall's motion was therefore nothing but a vote of non-confidence in the Government and confidence in himself. It was defeated by a four to one vote.

In 1878 the Legislature, in the course of revising upwards the salaries of departmental clerks, enacted that the Assistant Commissioners of Crown Lands, Public Works, etc. should be "deputy heads" of the Departments to which they were attached.⁴⁶ Thus these officials acquired the status (but not until 1905 the title) of Deputy Ministers. This was a sign, so far as the Crown Lands Department was concerned, that Johnson had consolidated his administrative authority, and had established a stable and satisfactory working relationship with his Minister.

The years of stability between 1873 and 1889 were not, however, years of stagnation. They covered a period of stress and strain in federal-provincial relations; when Ontario, under Premier Oliver Mowat, began to assert its constitutional rights as a province against the centralizing interpretation of Confederation favoured by Sir John A. Macdonald. On two occasions the Crown Lands Department found itself involved in the struggle, first in connection with the Manitoba Boundary dispute and second in connection with the federal disallowance of Ontario's Rivers and Streams Bill of 1881.⁴⁷

The Manitoba Boundary dispute lasted eighteen years and generated extreme bitterness between the parties concerned. Originally, Ontario sought an accurate definition of its boundary with the new Province of Manitoba, created by federal legislation out of the former territories of the Hudson's Bay Company. In 1871 and 1874 arbitration machinery was set up for this purpose; but when, in 1878, an award was made which fairly approximated to Ontario's claims and added over 144,000 square miles to her size, Macdonald's Government refused to ratify it and in 1881 passed an Act extending Manitoba's boundary to a line east of Fort William. At the same time the Dominion, as owner of the North West Territories, laid claim to the land, timber and mineral rights in the disputed area. In 1883-84 it placed under license nearly one million acres of timber limits, which it offered for sale at a special low rate of five dollars per square mile. A factor influencing Macdonald was his desire to hold an even balance between the territorial and political ambitions of Quebec and Ontario. All attempts to reach a compromise on the dispute were thwarted by a personal feud that existed between Macdonald and Mowat.

From 1881-3 there was constant friction between the Ontario and Manitoba officials in the disputed area. In July 1883 Mowat sent Aubrey White, who had recently joined the Crown Lands Department, to visit the district and if necessary seize any timber found to have been cut on lands claimed by Ontario, outside of the C.P.R. belt. However, White could find only two companies so operating, and hesitated to seize even their timber for fear of offending persons who were "friends of Ontario."⁴⁸ Later the Ontario Government set up a Commission of its local officials at Rat Portage to enquire into claims by squatters and others to mining lands, water privileges, farm or town lands etc. in the area. Both Ontario and Manitoba

increased their police forces in the area, which led to a clash in the winter of 1883 over liquor enforcement jurisdiction. When the constables of both provinces began arresting and jailing each other, it was seen that the quarrel had gone too far. Mowat and the Attorney General of Manitoba reached a compromise and agreed to refer the constitutional issue involved to the Privy Council in London. This led to a settlement of the boundary dispute along a line corresponding with Ontario's claim.

The second dispute, which took place during the same period, centred around an Act passed by the Ontario Legislature in 1881 "for protecting the Public Interest in Rivers and Streams and Creeks". This Act was the result of a dispute between rival lumbermen, Peter Maclaren, owner of a sawmill and lumberyard at Carleton Place near the Mississippi River, and Boyd, Caldwell and Son, who conducted lumbering operations higher up on the same river. Maclaren, a Conservative in politics, had made costly improvements (dams and slides) in the river, to facilitate his floating of logs downstream. Caldwell, uncle of a Liberal member of the Legislature, claimed the right to use Maclaren's improvements for floating his own logs down the same stream. When Caldwell appealed to the law courts to protect his property rights, the Ontario Government overrode his claim by passing a law that "all persons have, and always have had, the right to float sawlogs down all rivers, creeks and streams over which the Legislature of Ontario has authority."⁴⁹ Those who made improvements in streams did not thereby gain exclusive control of either the streams or the improvements; but all persons had a right to use them "subject to the payment to the person who has made such improvements of reasonable tolls."

Following a petition by Maclaren to the Governor General, Macdonald's Government at Ottawa disallowed the Ontario Streams Act, on the grounds that it took away the rights of one man to vest them in another, and was therefore a "flagrant violation of private rights and natural justice".⁵⁰ Ontario for its part declared the disallowance to be a violation of "provincial rights", and passed the Streams Bill again in 1882 and 1883 to be met with a second and third disallowance. Meanwhile, the lawsuit of Maclaren vs. Caldwell went through the courts and, after appeal and counter-appeal, reached the Judicial Committee of the Privy Council. This body ruled finally that "the right to float timber and logs down streams . . . was not limited to

such streams as are floatable in their natural state without improvements, but extends to the user without compensation for any improvements upon such streams."⁵¹ In 1884 the Ontario Legislature once more passed its Act, which this time came into force without disallowance. It applied to 224 streams in the Province and has remained the law ever since. The Act was regarded as a victory for provincial rights.

While these and other constitutional issues were being debated, another factor was influencing the general situation: a prolonged depression in the timber trade had set in. Prices of lumber fell and recovery was slow and uncertain. This, more than anything else, forced the industry and the Government to revise their ways of thinking about the use of the natural resources of the Province. A ferment of new ideas gradually took shape in the field of conservation, affecting forestry, fisheries and wildlife. Some of these ideas came from within the Department, others from outside. But their general effect was to begin the transformation of the Department from its traditional nineteenth century form, based on service to industry, to the ideal of public management of natural resources. The Pardee-Johnson regime thus marked the watershed between the old and the new aspects of the Department.

8

THE GOLDEN AGE OF TIMBER EXPLOITATION



After the Union of the two Canadas, the first systematic attempts were made to regulate the production and export of Canada's greatest asset – her forest wealth – in such a way as to yield maximum revenue to the State and maximum profit to the lumbermen.

As the long awaited status of responsible government was achieved, so the manner in which regulations for the exploitation of timber resources came into being, also evolved. During the old régime regulations had been promulgated by the Executive under the authority of the British Crown. Legislative committees might enquire and complain, but generally they were not listened to. The first timber regulations issued after the Union, in 1842, had much the same authority as those of the past.¹ However, a significant

difference emerged as one series of regulations succeeded another. Criticisms and grievances raised in the Legislature came to have increasing influence on the drafting of new regulations. Eventually, by 1849, it was possible for the Legislature to hold a full-scale enquiry² into the timber trade and to have many of its recommendations incorporated in legislation which governed all later regulations. The reasons for this were two-fold: the attainment of responsible government forced the Executive to become responsive to the wishes of the Assembly, and the Government of the United Canadas depended far more than its predecessors on the timber trade to provide the revenues needed to run the colony.

The Government's dependence on the trade led it at first simply to exact greater revenue through various revisions of the regulations. The sometimes disastrous consequences of this policy, which were given a full airing by the Legislature, gradually made the Executive realize that while the industry's aim of maximizing profits and the Government's aim of maximizing revenue conflicted, neither could be achieved as long as the industry experienced the type of depression it endured during the 1840's.³ Industry and Government had clashing aims, but both depended on the continuance of a healthy industry. Slowly the features that had characterised the administration of timber resources prior to Union – a casual attitude towards corruption and laxness in licensing and revenue collection – became less prominent, though they did not entirely disappear, and both parties realized that they faced a common enemy, uncertainty. Uncertainty had to be fought on two fronts: at home, where timber production could never be entirely predicted or controlled and abroad, where market fluctuations and changes in the policies of foreign governments could quickly turn a boom into a depression. As a result, Government became increasingly attentive to the views of prominent lumbermen and their spokesmen in the Legislature. Necessarily, the conflicting ambitions of Government and industry brought frequent clashes between the parties, but the greater threat of uncertainty imposed a degree of co-operation. The history of the exploitation of the forests from 1850 to 1900 and beyond has to be understood in terms of this struggle against uncertainty by allies with basically different aims.

The history of timber exploitation during the 1840's is the story of how Government and industry came to recognize their common



Old-time lumbermen's hotel, Jeffery's at Rockingham

cause. In 1842 and 1846⁴ the Commissioner of Crown Lands made his first two attempts to issue regulations designed to meet the revenue needs of the Union Government. The 1842 attempt retained several features of the old system, but made it clear that licences could only be renewed when they expired, a year after issue, if the licensee had obeyed the regulations, particularly the regulation requiring a minimum cut of five thousand feet per square mile. This minimum cut proved much too high and contributed to the severe over-production of timber in 1845 and 1846. The 1846 regulations reduced the minimum cut, first to one thousand and later to five hundred feet per square mile, but at the same time declared that all future limits were to measure only five miles by five miles, in contrast to the previous ten miles by ten miles. The larger limits under licence could be retained for another three years, after which they would have to be subdivided.

The few concessions to the lumbermen contained in these measures were outweighed in their effect by the other features intended only to increase the public revenue. For this decade was one of the most painful the timber trade had experienced. Some historians have blamed the British Government's removal of the preferential duty on colonial timber for these difficulties;⁵ but British policy, though

important, was not solely responsible. For while the industry had to adjust to a rapidly changing international market, it was also subject to difficulties originating at home, many of which were entirely beyond its control. As the accessible forests were destroyed and operations pushed further into the woods, it took longer to bring logs to market. Streams had to be taken at the spring flood or timber would be left on the banks until the next season. Worse, timber had to be cut long before the state of the market could be known. With such variables it was hardly surprising that over-production was a perpetual threat to an industry which "rolled on like a machine. Once started in the autumn, the machine could not be stopped, no matter what happened on the market."⁶ The frequency with which the Government had to extend the deadlines for payment of dues and ground rents was testimony enough not only to the political importance but also to the difficulties of men such as Egan, who in 1855 was reputed to have spent two million dollars on his operations.⁷ As demand in the United States brought about the increasingly capitalistic organization of the industry, over-production became an acute problem. Small producers, lured into the business by the prosperous 1830's, added to the glut on the market of the 1840's, and to some extent farmers cutting on their woodlots swelled the surplus. Trade fluctuations in Britain and the United States, too, had their effect on the demand for timber.

By 1849 the industry was at such a low ebb that the Legislature seized an opportunity to conduct a full-scale inquiry into the state of the trade. In February a Select Committee began hearing the evidence of a succession of lumbermen, merchants and government officials. W. W. Dawson, a prominent citizen of Bytown and a frequent spokesman for the lumbermen, summarized their complaints against the Government.⁸ It had demanded a minimum cut on licensed limits. It had threatened to subdivide limits and thereby encourage lumbermen to plunder their holdings while they still had them. Through its inability to arbitrate disputes over the loosely-defined boundaries of the timber berths it had forced many operators to hire gangs of toughs to protect their boundaries from trespass. To keep these men occupied when they were not pursuing their natural bent, operators often had to double, triple or even quadruple their normal production. The lumbermen, Dawson conceded, were also responsible for the depression, "very few, in the lumbering fever of

that period, pausing to consider the ultimate consequences"; but the Canadian Government too had to bear its fair share of the blame.

Dawson and other spokesmen proposed an alternative to the system of requiring lumbermen, when they took out a licence, to deposit a quarter of the dues on the quantity they were obliged to cut. He suggested that a ground rent of two shillings and sixpence per square mile should be levied as "a final payment . . . for every limit upon issuing the licence." By doubling the ground rent each year the berth remained unoccupied the Government would avoid the creation of monopolies on the limits, a possibility it greatly feared. Dawson was highly critical of the system of forcing operators to produce a high cut from each limit; also of the method of charging timber dues according to an assumed average length for each stick of thirty-eight feet; for this meant that "a piece of timber half the size and less than one-fifth of the value was charged as much as the largest and finest tree that ever went to the market."⁹

The Committee's report strongly supported the lumbermen and their recommendations, calling for "wholesome regulations" for granting licences, a more equitable assessment of dues and less oppressive import duties on articles imported for use by the trade. The report paved the way for the passage, in 1849, of "An Act for the Sale and Better Management of Timber upon the Public Lands", a statute which governed timber administration until the end of the century.¹⁰

Undoubtedly, part of the reason for this Act's long life was the fact that it left large areas of regulation to be filled by administrative decree. Probably, too, its longevity can be attributed to the fact that it was drafted at the end of a particularly formative period for the industry. By 1850 the industry had adopted the structure it was to retain for the next fifty years. Its needs were fairly clear to those who were involved in it, and it was possible to draft regulations which harmonized with those needs. Finally the Act was designed both to meet the needs of the industry and to allow government to derive a reasonable revenue from the country's timber resources. The Act would remain unchanged as long as it met these two needs and as long as the needs themselves, along with the philosophy they implied, did not alter.

What was then the basic purpose of the Act? Elsewhere we have



A logging team in Muskoka, 1900



Loggers sweeping Almond Creek, near Arnprior, 1902

suggested that the role of government was seen to be to make the application of all government regulations uniform and consistent, to keep revenues from dues and rents at the highest possible level, and to arbitrate between rival interests in such a way as to ensure prosperity to all parties.¹¹ An examination of the Act and the regulations¹² it authorized reflects this attitude towards administration. It provided for the sale of the timber growing on the public lands of the Province, and for its protection "against the frequent and excessive depredations committed upon it in the various parts of the Province." It established licensing arrangements to meet the three-fold need for regulation, collection of revenue and arbitration between interests.

To turn first to revenue collection, licences were governed by the regulations and timber rates, the Government's source of income, established by the Governor in Council. A lumberman's rates were calculated from his sworn statement of his production. The interests of the Department were safeguarded in two ways. First, before the trees were cut the operator had to give bonds for the amount of the estimated dues. Second, if a lumberman did not state what timber he had cut under licence the Department could treat the timber as cut in trespass, and could seize and sell it. If the operator cut without authority, he could be fined fifteen shillings for each tree shipped out of the country and proved to have been cut in trespass. While the timber was still in the country the Department could seize it and sell it. However, the affidavit of one or more persons was needed before the officials could seize any timber, though once seized the burden of proof of ownership rested on the operator.

The need to maintain harmony between interests was dealt with as well. The licences had to describe the limits as accurately as possible and were valid for one year as long as no earlier valid licence was found to apply to the same territory. A licensee had the right to take possession of the ground on his berth and to exclude all others, subject to the regulations, and had property rights in all trees, timber or lumber, whether or not he had cut them.

The Government's approach to tenure of licences showed greater appreciation of the lumberman's needs. By applying at the end of May each year and depositing money and bonds by the end of September, the lumberman could retain his limits as long as he met the requirements of the licence. If he failed to meet his deadlines or

otherwise forfeited his licence the lumberman would see his limits put up for public sale, though the Department often tolerated minor breaches of the regulations. To prove he had occupied his limit, the lumberman had to show he had achieved the minimum cut, but if he had made improvements costing £6 per square mile, he could retain his limits regardless of the size of the cut. Under these regulations, especially after the ground rent scheme was introduced, the licence holder could almost count on retaining his limits as long as he chose. In time this system came to be known as the 'perpetual lease'; and while open to abuse, it reflected the Government's recognition that the best interests of the country and of the industry demanded administrative flexibility. Nevertheless there were areas where flexibility was not good policy. If the operator would not pay slide or timber dues, or make final settlement of bonds; if he was in default with the Department; if he took violent possession of disputed grounds; if he refused to comply with the decisions of the courts or arbitrators or with the regulations head office; or if he forcibly interrupted surveyors, he could be refused a licence. Such provisions, enforced by penalties, not only gave the Department greater control over the collection of revenue but helped prevent violence in the woods and promoted peaceful arbitration.

An effort was made to ensure that the business of granting licences and arbitrating boundary disputes was performed "with the least possible delay". This was probably a reflection of the stature of the industry and of the importance of the time factor in its operation. Administrative delay might mean considerable loss in revenue.

The regulations also recognized a new factor in control of the woods. The settler was becoming a burden to the lumbermen.¹³ By the middle of the century the two were confronting each other more frequently. The lumbermen began to complain that settlers were setting fires that destroyed the forest; that they were cutting trees in trespass and were clearing land fit only for growing trees. Squatters at times were able to force lumbermen to pay for the right to cut trees on land they already held under Crown licence.¹⁴ The Government attempted to deal with this problem by fixing limits to settlers' cutting and by providing penalties for those settlers who disregarded the regulations. These measures were inadequate and formed but the first of many official attempts to halt the never-ending guerrilla warfare between the land and forest interests.

While the Act did not entirely rectify the failings of the previous system, which had been responsible for many of the difficulties the industry faced in the 1840's; by introducing more stringent regulations against trespass, by giving the operator assurance that his licence could be renewed and by attempting to minimize violence in the woods, it "lessened the temptation to reckless over-production and unsystematic wasteful methods of operation",¹⁵ and thereby did much to stabilize the industry.

For the lumbermen the Act was a major step forward but not a major victory. When licences were taken out, they still had to deposit one quarter of the duty on the quantity of timber to be made, and post bonds for the remainder. They still had to make a minimum cut, though it was reduced to five hundred feet of timber per mile and could be avoided under certain conditions. They were particularly irked by this proviso, which the Government had apparently adopted to prevent monopoly on the part of large operators, though only a few years later nine hundred licences in effect in the whole province of Canada were held by five hundred operators.

The lumbermen were soon pushing for further improvements and, in particular, the elimination of the minimum cut. They had fully supported Dawson's proposal, which the 1849 Act had disregarded. The proposal had however aroused government interest; for in 1850 the Commissioner advised the Executive Council that a new system of control which included ground rent was being considered for the St. Maurice region and that the applicability of such a measure to the whole of the timber lands was under review.¹⁶ On May 15th, 1851, Council debated a petition from the Gilmour Company and other lumbering interests,¹⁷ supported with some amendments by a lengthy and illuminating report from the Ottawa Crown Timber agent A. J. Russell,¹⁸ praying for the adoption of the ground rent system. The Commissioner recommended this measure "as an effectual means of preventing the evils which arise from monopoly on the one hand, and from overproduction on the other." The system was officially introduced in the Regulations of August 8th, 1851.¹⁹

A provision for doubling the rent for each year of non-occupation was included. This had been put forward in 1849 by Dawson, but was probably included in the 1851 Regulations as a result of Rus-

sell's forceful contention that the ground rent charge alone would be too insignificant to keep the operators from locking up, unused, vast tracts of timber land.²⁰ With the adoption of the ground rent system, the deposit on account of dues was abolished, though security was still required. Thus capital, always in short supply, could be used more effectively by the lumbermen throughout the operating season. The system stayed in effect until 1855, when it was altered significantly. By that time the cumulative ground rent, imposed when operators did not occupy their berths, had begun to cause difficulties. As the Commissioner pointed out, the constant increase in rents "at last comes to a point when the increase is so great and sudden that those who held any timber berths in reserve, had either to occupy or relinquish them."²¹ A berth originally bearing a rent of £6 5s would, after non-occupation for one season, cost £12 10s, then £25, then £50 and so on. The sternest administrator had to admit that this rule was too harsh, quite aside from the over-production it encouraged. By 1855 pressure from lumbering interests led to an alteration in the formula. Henceforth, the maximum penalty for non-occupation was limited to the minimum amount which could be expected to accrue from dues were the berth operated.

Further changes introduced in these regulations required that the operators report their shipments when they left the agency where they had been cut and when they arrived at Quebec. Saw logs cut on public lands and exported from the province were to be charged a double rate "to encourage the domestic manufacture of deals and other sawn timber."²²

The new system, which stayed in effect with only minor changes until 1866, had many advantages from the viewpoint of the industry and the public revenue. The lumberman was no longer shackled by the need to produce a minimum cut; while the withdrawal of the clause requiring a deposit to cover dues on the timber meant that capital was more readily available. The Government appeared satisfied that monopoly could not exercise a crippling sway over the major timber-producing areas, and was soon more than satisfied with the increase in revenue.²³

The development of the ground rent system was an important measure; but just as important were the Government's attempts to improve the system of collecting dues. This activity took several forms. A relatively minor innovation was the decision that payments

to the Department should be made through banks rather than agents;²⁴ but the most important changes related to the agents themselves.

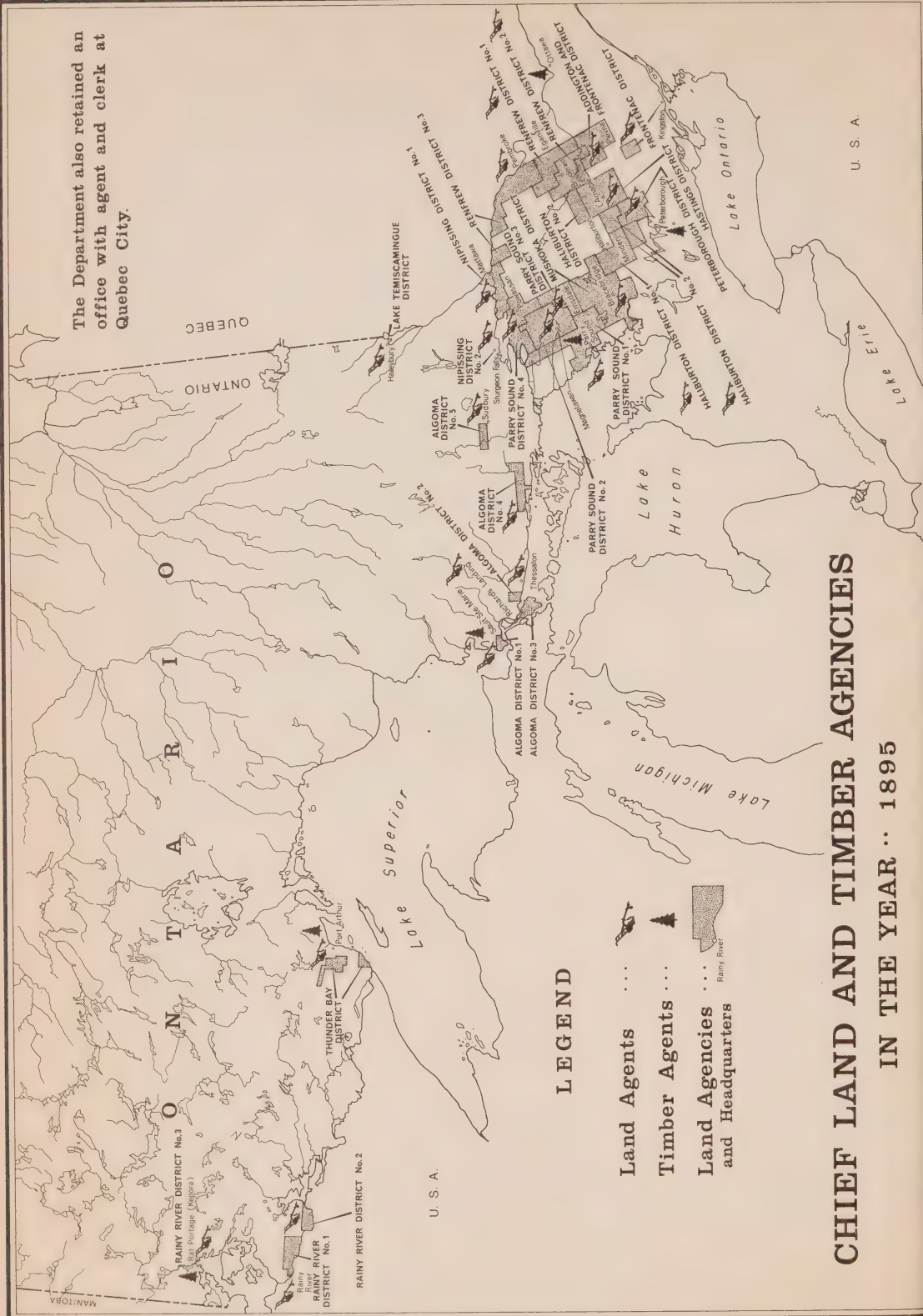
The "very imperfect and unsatisfactory" system of collecting timber revenues troubled several Commissioners of Crown Lands as well as many lumbermen, who complained that where dues were efficiently collected the operator had to pay a good deal more for his timber than his rival in the virtually unregulated parts of the province.²⁵

The first steps to correct this anomaly were taken in 1852 with the reorganization of the collection system at Quebec. Since the timber count at Bytown was frequently inaccurate and many lumbermen refused to pay the increased duties assessed as a result of the Quebec recount, it was decided to abolish the timber count at Bytown and to base collections entirely upon the returns of the Supervisor of Cullers at Quebec.²⁶ This innovation, it was hoped, would earn increased revenue through the collection of dues not previously collectable, would save money through the reduction of the Bytown staff, and would serve as a preliminary step to further changes.

The Department was also concerned with the frequency with which Crown timber had been passed off as timber cut on private lands. To correct this abuse regulations had to be introduced requiring local Crown Lands agents to issue certificates giving the status of timber cut within their agencies. More officers were needed to regulate the Richelieu River traffic; an equitable system of checks had to be established "operating not only to ensure but also to make apparent" the honesty of officials. On June 4th, 1852, an Order in Council was passed implementing these measures. Henceforth, assessment was to be based on the actual content in feet of lumber, instead of an arbitrary average; the Supervisor of Cullers and the Collector of Timber Duties were to work together at Quebec and to keep proper accounts. The staff on the Richelieu was increased.²⁷

These changes improved collections at established centres, but not throughout the country. However, further changes were soon under way. In the same year, according to Cauchon, the timber-regulating functions of the Department were consolidated under one branch, the Woods and Forests Branch.²⁸ This measure was eventually to add considerably to the Department's ability to con-

The Department also retained an office with agent and clerk at Quebec City.



LEGEND

Land Agents ...

Timber Agents ...

Land Agencies
and Headquarters ...

Rainy River

CHIEF LAND AND TIMBER AGENCIES

IN THE YEAR .. 1895

U. S. A.

trol timber exploitation. In January, 1854, the process of extending the field organization began with a recommendation to establish a Crown Timber agency on the Trent "where an extensive timber traffic exists, from which little revenue has heretofore been derived."²⁹ Two months later Council approved the recommendation, specifying that the agent had to be a good accountant "capable of undergoing the active drudgery of travelling through the woods and counting the timber and logs personally."³⁰

The establishment of the Trent, or Ontario, agency led to a complete review of the policy regarding agencies, and a more extensive reorganization was undertaken. For years the local land agents had been charged with supervising timber operations in their districts. "This method," says Cauchon, "was very defective." The lumberers, he argued, were "among the most acute and energetic men in the country", and the average land agent was unable to resist their power. Ontario timber agents had to be few in number, entrusted with the regulation of extensive areas, but paid enough to ensure that they were men of "business capacity". The Commissioner concluded that the public revenue and the timber trade would both benefit from a separation of the timber and land agencies. The Province of Canada was to be divided into ten timber agencies of which five, the Ottawa, Lower Ottawa, Ontario, Canada West, and Huron, were located in what is now Ontario. The agents were to be fulltime employees receiving salaries ranging from £150 to £300. They were to devote their whole time to supervising the lumbermen; for failure to perform this duty "might cause the loss of thousands of pounds."³¹

In 1854 only the Ottawa agency was in operation. Agents were not yet needed in the Canada West or the Huron Districts, but were required in the Lower Ottawa and Ontario regions. Agents for these districts were soon appointed with headquarters at Montreal and Belleville, respectively. A short time later an agent was appointed for the Western district which covered the region west of Toronto into the Peninsula. In 1855 an agent was appointed for the Huron and Superior territory with headquarters at Barrie.³² The Western agency later became part of the Huron and Superior district.³³ The latter in turn disappeared in 1863, but was revived after a year and was gradually extended as the Western District, until it covered the whole western part of the Province,³⁴ with timber agents being

appointed from time to time as the lumbering industry moved westward. By the end of the century, there were six timber agencies in the Province.³⁵

As the lumbermen spread into the western regions, the agents' tasks became increasingly difficult. The mere sub-division of a vast district could not ensure its effective regulation. Agents had magistrates' powers,³⁶ but this was hardly effective, and was chiefly intended to enable them to receive affidavits. Even when logging operations were conducted in the relatively populous eastern parts of the province, it was difficult to seize timber cut in trespass from unruly gangs of lumbermen.³⁷ As the industry developed along the shores of the Great Lakes, the problem of preventing the illegal shipment of timber across the Lakes to the United States became almost insuperable. Along Lake Erie the many facilities existing for the transfer of lumber across the Lake made the difficulty of protecting the timber and collecting the dues very great indeed. The great extent of the country made it "almost impossible" for the Crown Timber agent to be "personally cognizant of all the lumbering operations going on", so that "the defects in the Timber Act and in the timber regulations were more obviously seen and felt in this section of the province than in any other." The Department successfully suggested that collectors of customs, who were administered by the Minister of Finance, should withhold clearances from any vessels carrying lumber not certified by local Crown Timber agents to be free from dues.

Cooperation with the Department of Finance helped eliminate one serious abuse, but there were many others. For example, the Timber Act required lumbermen to furnish statements under oath of the quantity, description and source of their timber only if they had cut it under licence. If they did not have a licence, they could claim, without taking an oath, that the timber had been cut on private lands. Many lumbermen, particularly those in the Niagara Peninsula, used this loophole to evade paying dues, and the agents were powerless to take action against them, unless a conscientious citizen would provide an affidavit stating that timber had been cut in trespass. Since most people did not want to be known as "informers", it was always very difficult to convict a lumberman of having cut timber without authority. To eliminate this abuse the Department began allowing agents to hire, or to recommend the hiring of wood



Sawing timber by hand, 1913



Waste on a saw-log operation

rangers. These men traversed the forests, inspecting timber operations and attempting to keep an eye on the lumbermen. They did, to some extent, limit the irregularities of the operators.

Despite the wood ranger and the agent, however, the Department's records are dotted with the difficulties of controlling the lumbermen. Thus, for example, in 1879 the Commissioner reminded Council that in the more remote areas many lumbermen cut timber without licence. Few of them seem to have been brought to book; at best lumbermen who admitted to trespassing were charged an additional fifty per cent of dues, a small price to pay considering the value of the timber they had removed. Time and again the agents and the rangers were unable to enforce the law.

The lumbermen were not the only individuals who troubled the agents; there were frequent disputes between lumbermen and settlers, or squatters. The squatters, who were often numerous, tended to give the most trouble.³⁸ They were frequently able to manipulate the regulations to such an extent that they could claim greater privileges than the *bona fide* settler. As a result, many squatters plundered the forest lands on which they had established themselves.

To an extent, however, the problems of trespass, of fraudulent statement and collection of dues were but a minor part of the agent's difficulties. He could ignore the shortcomings of the regulations, but when lumbermen wanted arbitration on the exact definition of their limits, it was often hard to satisfy all parties. Many agents complained that arbitration cases were often as intricate as any handled by the courts; and their task was not made easier by faulty surveys nor by the habit many lumbermen had of moving boundary markers.³⁹ Finally, the agents' recommendations often found dilatory and grudging response from headquarters. Only slowly did the agent succeed in conveying to the officials in Toronto the conviction that he need greater assistance if he was to return a correct revenue to the Crown. It was difficult for headquarters to understand the agent's problems; often communications were poor and administrators seldom saw the territories of which they had charge. Nevertheless, despite its shortcomings, the agency system established in the 1850's did much to shape the structure of the Department and to improve the collection of revenues.

When "the protection of the Timber Revenue and the Wants of

the Trade” were immediate and obvious, the Government could act quickly enough. In 1860 it moved promptly when “wany” timber first appeared on the market. The Commissioner reported to Council in May, that some five million feet of “‘Wany’ or Octagonal-shaped” timber was expected to arrive in Quebec for the shipping season. The law, he noted, “makes no provision for the measuring of timber of this description” and therefore measuring procedures had to be prescribed.⁴⁰

The regulations which had seen such long service between 1851 and 1866 were replaced twice before 1870,⁴¹ due chiefly to the adoption of the auction system. The auction system had been suggested before: Peter Robinson had been instructed to dispose of limits by auction; and from time to time it had been included in the regulations for special purposes.⁴² But it was not adopted as a practical method of disposing of timber. The spread of lumbering out of the Ottawa Valley, where the long-standing division of the forest into timber berths had tended to make the auction system

AUCTION SALE
OF
TIMBER BERTHS

DEPARTMENT OF CROWN LANDS,
Woods and Forests Branch.

NOTICE

MUSKOKA AND PARRY SOUND DISTRICTS,
WEDNESDAY, the 6th DAY of JUNE next,

CONDITIONS AND TERMS OF SALE:

Poster advertising auction sale of timber berths, 1877

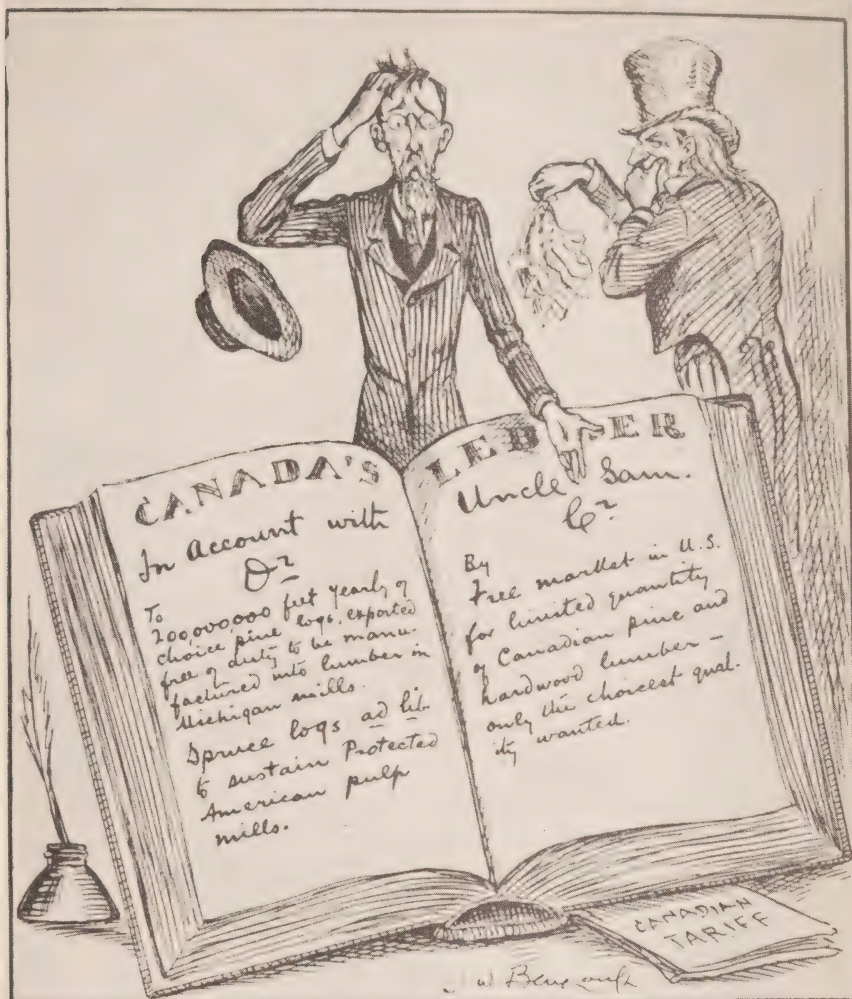
impractical, into the Muskoka-Parry Sound regions meant opening up tracts so extensive that a new means of disposal had to be adopted.⁴³ Thus the 1866 Regulations first introduced formally the auction system which was further amended by the regulations of 1869. Under the system timber limits could be obtained through purchase at sale, through applications for forfeited berths, or through renewal. Wherever possible, the Commissioner ran survey lines through the area to be sold, so that the Department could estimate the value of the limits and establish an upset price, or minimum bid. When the lumberman participated in the auction, he was bidding for the right to take out a licence in a particular area, not for the area itself. In addition to the sum he paid for this right, which was known as the bonus, he had to pay the established ground rents and timber dues. Under the Regulations the limits were always awarded to the highest bidder, regardless of his ability to exploit his new holdings. This practice encouraged speculation in timber limits.

The Government expected to realize considerable revenue from such sales and expectations were not disappointed. The 1866 Regulations prescribed a modest upset price of four dollars per square mile; but subsequent Regulations made no such provision, leaving the upset price to be fixed according to the Department's assessment of the limit's value.⁴⁴ Ground rent was fixed at two dollars per square mile in 1869 and new timber rates were established in the same year.⁴⁵

The auction system contained within itself the seeds of future disagreement between the lumbermen and the Government. When the Government decided, in 1887, to raise ground rents to three dollars per square mile and to increase the duty on timber and saw logs,⁴⁶ the lumbermen reacted sharply. Shortly after the increase was announced a group of prominent operators met in Toronto to organize their opposition. Their discussions led to the formation of the Lumbermen's Association of Ontario, a body which later became an important pressure group.⁴⁷

The burden of their complaint was best expressed by W. A. Charlton, who had consulted Commissioner Pardee prior to the 1885 sale and had been assured "that while the Government had the right to advance these dues and ground rents, they had not and did not intend exercising it."⁴⁸ Convinced, like Charlton, that the increase "was a piece of sharp practice", some thirty prominent members of

CANADA'S BOOK-KEEPER TAKING STOCK.



DOES IT PAY?

A Cartoon by F. A. Bengough in the 1890's

the group met with Pardee and Premier Mowat in the legislative library and presented their brief at some length. To little avail, however. Mowat made the Government's position quite clear when he said that he "could not understand what the delegation asked for, and wanted them to trust to the good faith of the Government to do nothing unjust."⁴⁹

The disgruntled lumbermen retired to lick their wounds and, in desperation, issued an ultimatum: if the Government did not meet their demands, they would boycott the forthcoming timber sale. But the Government was adamant and the lumbermen therefore had to live up to their threat. Unfortunately for their cause, the records show that this particular sale was one of the most profitable ever held. The test served to establish the Government's right to change dues and ground rents at will; though the lumbermen did win some concessions, for the terms of the 1890 sale guaranteed that timber dues and ground rents would not be raised for seven years on the limits disposed of at that sale.⁵⁰

The dispute of 1887 illustrates the disagreements which arose when government and industry both sought to maximize their revenues from the timber lands. The incident was in sharp contrast to events a decade later, when both parties were threatened with drastic reductions in revenue as a result of fluctuations in United States policy.⁵¹ The Dingley tariff was part of a series of tariff revisions undertaken by the United States Government in the 1890's. It imposed a duty of two dollars per thousand board feet on all sawn lumber entering the United States and provided that, if the Canadian Government attempted to retaliate by imposing an export duty of its own on saw logs, the American duty on sawn lumber would be raised by an amount equal to the Canadian export duty. "It was," the President of the Lumbermen's Association reported in 1900, "apparently a well-devised plan and its authors naturally plumed themselves on its success." For a time it seemed that the saw mill business on Georgian Bay was doomed, while mills in Michigan experienced a new boom. Appeals to the Federal Government failed, principally because the retaliatory clause left Ottawa powerless. The lumbermen asked the Ontario Government to prevent the export of all saw logs cut on Crown Lands. As the lumbermen were told by their president,

Immediate action was not taken, the Government acted with caution and deliberation, they not only heard the Ontario side of the question, but gave courteous and attentive hearing to the Michigan owners of standing timber, who with some alarm hastened to place their views before the Government.

The measure was eventually adopted and all licence holders were required to manufacture their saw logs in Canada. The courts upheld

the Government, which stuck to its decision despite heavy pressure. The effect was "wide and far-reaching". Saw log exports dwindled to the few logs cut on private and Indian lands, while the Canadian mill owner re-opened his business to buzzing saws and rising prices. The year 1899, the lumbermen were told, "will be remembered as one of the most eventful in the history of the trade."⁵²

The Dingley tariff affair was typical of the difficulties faced by the industry as a result of its dependence on two important external markets. The man who ventured into the trade undertook an enormous financial risk. The business, after 1850, was slightly safer than it had been during the 1840's; but a glance at the statistics recorded after Confederation shows that uncertainty was still the industry's chief foe. Depressions occurred frequently, often catching businessmen unawares. By 1850 the industry was adjusting to the controls imposed by the first Timber Act and was recovering from the blows of the 1840's. The square timber trade still dominated the industry, as a result partly of dependence on the British market and partly of the fact that trees large enough for square timber were still plentiful. Nevertheless, the United States market was becoming steadily more important. In that country the chief northeastern ports were in the throes of a battle for control of the hinterland, of which Canada



Raft of Square Timber on the Ottawa River at Hull

formed a part and was therefore able to benefit from the struggle. The canal building era had already tied the Province more closely than before to the New York sphere of influence; now the railway building boom brought other financial centres into the picture. The ventures of the period were not always successful, and at times turned out disastrously; but they did encourage American investment and, more important, they fostered competition, which led to a more diversified product that enabled Canadian producers to rely on a wider market than had hitherto been possible.

The demands of the American market were reflected not only in the decline of the square timber trade between 1850 and 1900, but in the relocation of the major lumbering regions, though American influence was only partially responsible for these changes. In 1856 Commissioner Cauchon estimated that 24,433 square miles were under licence in Upper Canada.⁵³ This figure remained relatively unchanged over the half century; but the location of the licences shifted significantly as lumbermen moved away from areas that had been cut over and abandoned, in order to open up new well-timbered areas. Thus the Ottawa region gradually gave ground to the Parry Sound and Muskoka regions as the centre of the industry. Then the north shore of Lake Huron became prominent and finally the Thunder Bay – Rainy River region.

The exploitation of these areas followed in part from the construction of railways capable of tapping the resources on previously inaccessible watersheds, and in part from exhaustion of timber supplies in the east; but also it depended on, and followed, the spread of settlement westward in the United States. The Americans' needs brought about construction of mills such as that built by United States interests at Long Lake, capable of producing seventy million feet annually,⁵⁴ or J. R. Booth's which could handle one hundred and twenty-five million feet per year.⁵⁵

The picture of steady progress and development implied in this story is deceptive. The fate of the Jones Boys mentioned in the ballad of that title was common enough:

Oh the Jones Boys!
 They built a mill on the side of a hill,
 And they worked all night, and they worked all day,
 But they couldn't make that gosh-darn saw-mill pay.

Uncertainty haunted an industry dependent on unpredictable natural conditions. Its huge investments made it a valuable keystone of the provincial economy. The difficulties imposed by nature, by the extent of capital tied up in the industry, were as nothing compared to the hardships caused by major depressions such as those of the 1870's and 1890's. It was useful to Canada to have the assistance of foreign capital but when such investment meant, as it did in 1886, that American operators, many of them Michigan saw mill owners, had control of 1,750,000,000 feet of standing timber on Georgian Bay, there was great danger that the investment might hinder rather than help native development. This was a very real threat during the tariff wars of the 1880's and 1890's.⁵⁶



Log Flume on the Mississagi River, 1947

"There was a time," said Joseph Cauchon in 1856, "when exceptional rules were the bane of the Lumber trade; when the consideration of special cases on special ground was so common that it was almost the rule instead of the exception."⁵⁷ Fifty years later, Cauchon's confidence that "exceptional rules" were being rapidly eliminated was as open to doubt as it had been on the day the words were penned. However, during this period at least, the rudiments of a system of "general regulations equally applicable to all," had been attempted, even though powerful lumbermen never found it difficult to influence politicians or to bribe officials whenever loopholes in the regulations were not broad enough to allow them their own way. Not all officials were venal. Many showed considerable farsightedness as well as administrative ability. Often, however, the insufficiency, ineptitude or venality of the field force prevented the full enforcement of regulations which, when properly applied, were capable of producing the results claimed for them. This was an age when government and industry were more intent on exploitation and revenue than on conserving a renewable resource. But towards the end of the century, government had begun to discard the notion that its role must be confined solely to disposal of timber lands, arbitration of disputes between interests, and collection of a substantial revenue. It had begun to see itself as a trustee of a vast public resource; and conservationists were doing all they could to encourage this attitude.

The regulations from 1849 to 1869 created the essential elements of a licensing system. The first regulations provided a basic structure of control which was greatly improved by the introduction of the ground rent system and later the auction. Gradually these controls provided the means whereby the lumbermen – and to an extent the settlers – could be taken in hand. The economic uncertainty that always plagued the industry often prevented stricter controls than those that were put into effect; but at least the Ontario industry, after 1867, experienced few difficulties as a result of internal political uncertainty. Confederation itself hardly altered the Department's administrative system, though it sharply reduced its territory. The Government of Ontario assumed the right to administer the woods and forests of the Province, but chose to retain the regulatory structure of pre-Confederation days. Even the Act of 1849 remained virtually unaltered throughout the period. The provincial and

federal governments squabbled over their respective rights from time to time, and some effort had to be made to co-ordinate their authorities, but on the whole, the forest industry experienced little change as a result of these political adjustments. When the century came to a close, the industry and government had experienced nearly fifty years of working in harness. The partnership had often been uneasy, but from the point of view of 1900, it had been successful enough, and had recently been improved by a successful tussle with United States interests. There was little to indicate that over-expansion and the development of a new industry would soon disrupt this happy arrangement.

9

THE FERMENT OF NEW IDEAS



Down to the middle of the nineteenth century no one was bothered about conserving Canada's natural resources. These resources were held to be inexhaustible and therefore in need of no protection, apart from making sure that those who exploited the valuable timber did not monopolize it or try to evade paying their share of the public revenue levied on its use. Beyond this, everything should be left to the working of "the natural laws of supply and demand".

The first breach of this attitude occurred with respect to certain aspects of wildlife. Sport, rather than monetary profit, supplied the motive for the change. As we have seen in Chapter Seven, the alarm signal was sounded by the decline in the Atlantic salmon and afterwards by the growing scarcity of game. Between 1807 and 1857 six

Acts were passed by the Legislature, prohibiting torchlight fishing, spearing and netting of salmon (1807 and 1821), setting a close season for deer and other game (1821 and 1839), prohibiting Sunday shooting (1839) and partially protecting waterfowl (1856). The failure to enforce the earlier Acts led to the two Fishing Acts of 1857 and 1858, where for the first time a real attempt was made to provide enforcement machinery.¹

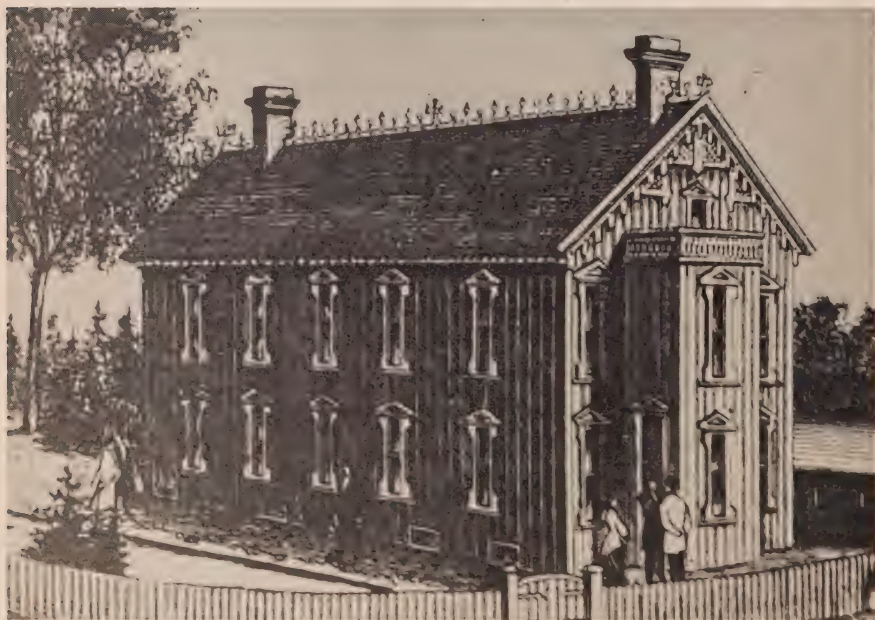
These Acts owed their vitality to the zeal of a few Crown Lands officials – notably Richard Nettle, author of *Salmon Fisheries of the St. Lawrence*; W. H. Witcher, a clerk in the Surveys Branch with a penchant for salmon fly fishing; and Dr. Pierre Fortin, a versatile Quebec legislator and magistrate who for several years captained a government yacht that patrolled the fisheries of the St. Lawrence Gulf. Nettle and Witcher were the two fishing superintendents appointed under the Act to travel up and down the St. Lawrence and the Great Lakes, grappling with the recalcitrant fisher folk who ignored or defied the law. The superintendents and their staff of overseers were profoundly shocked at the malpractices they encountered. For example, in 1859 Witcher turned in to Commissioner Vankoughnet a lurid report glowing with indignation at the evils of torchlight spearing of spawning salmon. In burning phrases he denounced “the crowning act of extirpation. The luckless fish killed at a stage which makes the bare feature of destroyal in the highest degree deplorable”, and “the ruinous consequences of such improvidence . . . the wrong to the public of suffering the richest and finest fish in Canadian waters . . . to be thus traded when almost valueless.”²

The tragedy of these early efforts at conservation enforcement was that they failed to save the salmon in the Great Lakes, which became extinct before the end of the nineteenth century, mainly because of growing urbanization and consequent water pollution. The modern (1960's) conservationists' concern with pollution came seventy-five years too late for the salmon. But the early regulations and their enforcement may, however, have had some effect in saving other less but also valuable fish, such as the speckled trout.

The 1860's saw a gradual petering out of the fish conservation campaign. In the same year (1859) that Toronto sportsmen published a leaflet reaffirming their intention to uphold the law, John McQuaig, the superintendent of fisheries for Upper Canada,



Indians spearing salmon by torchlight. A painting by PAUL KANE



SAMUEL WILMOT's fish hatchery at Newcastle, 1887

was complaining to his Commissioner about the increasing difficulties of enforcing it.³ An early martyr to the cause of conservation was William Gibbard, a well known Simcoe County land surveyor, who in 1852 published a valuable map of the county. Later, in 1859, he combined part-time employment as a revenue officer with part-time service as a fisheries overseer for the Lake Huron and Superior district. Gibbard was an enthusiast for protecting the speckled trout, which was already becoming a prime attraction to American tourists. So much so that Gibbard complained the fish was in danger of extinction through being used as bait for catching larger fish! But it was dangerous for any man to undertake two unpopular assignments at once – the suppression of the illicit spirits traffic and the enforcement of the fishing regulations; all the more so when Gibbard, to assist him in his work, sought and obtained the status of a stipendiary magistrate. His strong will and impetuous temper soon involved him in serious trouble.

In July 1863 he sailed for Manitoulin Island aboard the Hudson's Bay Company steamer "Ploughboy" for the purpose of asserting the authority of the law over a local Indian band that raised violent objection to the granting, to a French Canadian, of a fishing lease of an island (Lonely Island) which they claimed had never been ceded by treaty to the Crown. Gibbard took with him a posse of armed constables, but was forced, in the face of an ugly riot, to leave Manitoulin with his mission largely unfulfilled. He succeeded, however, in arresting one of the ringleaders, an Indian named appropriately 'Little Thunder', and conveying him in handcuffs on the steamer to Sault Ste. Marie, where he persuaded the magistrate to commit him to trial. But the Indian was granted bail and allowed to sail back with his accuser on the "Ploughboy's" homeward trip to Collingwood. The Indian was seen to leave the ship when she touched at Manitoulin Island on the evening of July 27th. Meanwhile Gibbard, who had been much upset by the disturbing scenes he had earlier faced on the Island, did not go to bed but was noticed by his fellow passengers to be pacing the ship's deck, instead of sleeping in his stateroom. Next morning he was found to have vanished, and several days later his body, bruised and lacerated, was washed up on shore. It was assumed that he had been set upon and thrown overboard during the night (possibly by the Indian), although some urged that he might have met his death by accident or even committed

suicide. Later, a coroner's jury found that Gibbard had been the victim of foul play; and Simcoe County Council offered a reward of two hundred dollars for the apprehension of the murderer, but no one was ever brought to book for the crime. Gibbard's widow, however, was compensated for her loss by the Crown Lands Department, in a special grant of three hundred dollars.⁴

Gibbard will be remembered for a quaint anecdote he included in his 1859 Report:

A very shrewd remark was made to me by an old Indian, in broken English . . . at Horse Island, one of their largest fishing grounds: 'What for you come now to see about fish? Why not come before, ten years gone? American been here, build house, chop wood, bring big boat, catch all fish, cheat poor Indian, sell him bad whiskey and bad goods; now no fish. You make take care of fish!'⁵

After Gibbard's death, efforts at fish conservation languished; and a new Fisheries Act, passed in 1866 on the eve of Confederation, failed to revive them. For at that time the British North America Act allocated fisheries control to the Federal Government, which did little or nothing; while the Province of Ontario remained out of the fish and game conservation picture until the 1890's, when the whole question was reopened by a ruling of the Privy Council giving Ontario a new status in the regulation of inland fisheries.⁶ In the intervening period the only fish conservation work was that carried on for the Dominion Government by Samuel Wilmot, at his Fish Hatchery at Newcastle in Durham County, between 1868 and 1894.⁷

These early efforts at fish conservation followed a pattern which seems to repeat itself in other conservation movements. First, there is a period of incubation, during which public discussion brings about unsuccessful legislative experiments which, however, serve to crystallize opinion. Then, after an interval of frustration or stagnation, the movement takes on new life, usually under the spur of some fresh revelation of waste or damage. This is quickly followed by positive legislation and effective enforcement.

Some Crown Lands officials had taken a leading part in the struggle for fish conservation. Others, too, were active in the parallel campaign for forest conservation. But they played at first only a supporting role, since the idea of forest conservation had first of all

GAME LAWS!

OF UPPER CANADA.

An Act for the better protection of Game in Upper Canada.

Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:—

1. From and after the passing of this Act, the Act intitled:—"An Act respecting Game Laws of Upper Canada," chaptered sixty-one in the Consolidated Statutes for Upper Canada, shall be and the same is hereby repealed.
2. No Deer or Fawn, Elk, Moose or Cariboo shall be hunted, taken or killed between the first day of January and the first day of September in any year.
3. No Wild Turkey, Grouse, Partridge, or Pheasant shall be hunted, taken or killed between the first day of February and the first day of September in any year.
4. No Quail shall be taken or killed between the first day of February and the first day of October in any year.
5. No Woodcock shall be taken or killed between the first day of March and the fifteenth day of July in any year.
6. No Wild Swan, Goose, Duck, Widgeon or Teal shall be hunted, taken or killed between the first day of April and the first day of August in any year.
7. No Wild Turkey, Grouse, Partridge or Pheasant, Quail or Woodcock shall be trapped or taken by means of traps, nets, snares, springs, or other means of taking such birds, other than by shooting, at any time whatever; nor shall any trap, net or snare be made, erected or set either wholly or in part for the purpose of such trapping or taking.
8. No Deer shall be trapped or taken by means of traps or snares at any time whatever; nor shall any traps be set or erected for the purpose of such trapping or taking.
9. No person or persons shall have in their possession any of the animals or their hides, or any of the birds hereinbefore mentioned within the periods above respectively prohibited, without lawful excuse, the proof whereof to be on the party charged, nor shall any sale of any of the game mentioned in this Act take place save within fourteen days from the termination of the several periods hereinbefore respectively fixed for the killing thereof, nor shall any possession for the purpose of sale be deemed lawful save within such period of fourteen days.
10. No eggs of any kind of the birds above enumerated, and hereby declared to be Game, shall be wantonly destroyed at any time.
11. Every offence against any provision of this Act, shall be punished summarily on information and conviction before a Justice of the Peace, by a fine not exceeding fifty dollars, nor less than five dollars, in the discretion of such Justice, with costs, or in default of payment, by imprisonment in a common goal for a term not exceeding two months or by imprisonment in any common goal for a period not exceeding three months without fine; one half of the fine to go to the Municipality and the other half to the informer.
12. In all cases confiscation of the Game shall follow conviction, and the game so confiscated shall be given to some charitable institution or institutions at the discretion of the convicting Justices.
13. Any person may destroy traps, nets or snares set or erected, either wholly or in part, in contravention of any provision of this Act.
14. And whereas it is desirable to prevent the destruction of certain animals at seasons of the year when their furs are of little or no value; It is further enacted, that no Beaver, Muskrat, Mink, Sable, Otter or Fisher shall be trapped, hunted, taken or killed, nor shall any trap or snare be laid for the same or any of them, between the first day of May and the first day of November in any year; and all persons violating this section of this Act shall be liable to the same proceedings and penalties, to be enforced and recovered in the same way as are above declared with respect to Game.
15. This Act shall apply to Upper Canada only.

The Sportsmen of Toronto are determined to carry out the above Laws, and request all Sportsmen in Upper Canada to aid them in the protection of Game, and they will bear their proportion of expense of Conviction of Offence. *Apply at the Colonist Office.*

"Game Laws of Upper Canada", a poster issued by the sportsmen of Toronto in 1860

to crystallize in the minds of the lumbermen, who were making their living out of it. As early as 1847 a rising young Nova Scotia geologist, J. W. (afterwards Sir James) Dawson, had warned the Canadian public against the danger of "the depletion of the forests of British North America".⁸ But his words went unheeded until, after the collapse of the timber boom of 1846-1848, the lumbermen began to make a painful reassessment of the methods and objectives of their industry. In 1849 the Legislative Assembly of Canada appointed a Select Committee to enquire into the causes of the depression, including "the protection of the forests from unnecessary destruction."

The lumbermen who gave evidence before this Committee and a subsequent Committee in 1854-55 ventilated many grievances and suggested various remedies. Some protested against the imposition of a minimum cut and against the practice of levying Crown dues upon the number, rather than the measured length, of sticks of timber cut.⁹ When this was corrected in the Act of 1849, criticism began to be turned against the wasteful methods of cutting used in the older branch of the industry – the square timber trade. In 1855 Alexander Galt denounced the export of square timber as "a profligate waste of one of the greatest sources of provincial wealth";¹⁰ and William Spragge, then chief clerk of the Crown Lands Department, echoed him by calling attention to "the enormous amount of valuable wood which . . . in process of time uselessly rots upon the ground," after the axeman had finished his work.¹¹

In 1855 the danger of forest fires was directly discussed for the first time. The general view of lumbermen appeared to be that fires were caused partly by settlers and partly by squatters. W. H. Burke of Bytown spoke of settlers who "spread fire and havoc through the pine forests" and urged that "no isolated settlers be permitted to locate amid the pine forests".¹² A. J. Russell, of the Crown Lands Ottawa agency, urged the enforcement of a law against burning brushwood during the fire season.¹³

From this it was but a step to demand the segregation of timber lands from settlement lands. Burke denounced what he termed "the wanton, foolish and insane policy of the Crown Lands Department in surveying a township where nothing but pine and rock exist . . . We go for keeping a fair line of separation between the lumbering and agricultural regions, as nature has laid it down."¹⁴ Again he had

the support of A. J. Russell, who agreed that "it is not desirable to have forest tracts wholly unfit for settlement surveyed into subdivided townships . . . It [tempts] settlers to occupy inferior lands where they cannot afterwards prosper, for the temporary profit of the timber."¹⁵ Yet in spite of this, the Committee of 1854 and another of 1863 could not agree to recommend any definite action for the time being, other than that the Government should "ascertain positively the character of the country before throwing open any tract of land for settlement."¹⁶

In 1858, when Vankoughnet became Commissioner of Crown Lands, he sent his newly promoted Superintendent of Woods and Forests, P. M. Partridge, on a tour through the Province to collect information on the state of the forests. Later the Commissioner issued a questionnaire to the lumber trade calling attention, among other matters, "to the great annual destruction of the forests by fire," and to the need for legislation to check it.¹⁷ Next spring, Partridge hopefully turned in to the Commissioner a report on his tour, urging immediate action on the fire danger. But by then his volatile chief's zeal had been diverted to a new project, that of sending the Supervisor of Cullers on a trip to Europe to promote the use of Canadian lumber abroad. Partridge's plans were therefore held in abeyance.

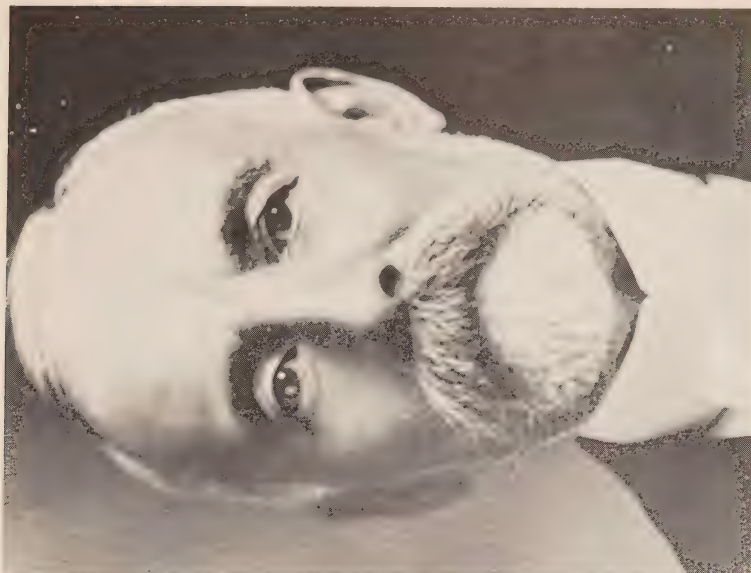
In 1867, when Alexander Campbell was Commissioner, Partridge tried again. Campbell was obviously conservation-minded, as he had shown in his Annual Report for 1865, wherein he recommended segregated land-use and the adoption of Scandinavian practices of scientific forest management. Accordingly, Partridge re-submitted to Campbell his 1859 Report, slanting it towards new developments in the mining field. He called attention to "the numerous camps and other fires which the prospectors" in the Hastings and Ottawa districts "will undoubtedly make use of." He recommended that all mining licenses include a provision guarding against the outbreak of fire; that a new Gold Mining Division of the Crown Lands Department be created, and inspectors appointed with magisterial powers to punish arson and mischievous damage to trees and shrubs. Campbell approved this proposal and instructed Partridge to draft the necessary Orders in Council to carry it into effect.¹⁸

But no further action followed – ostensibly because of the pressure of business incident to Confederation in July, 1867. Significantly, however, one of Campbell's last official acts, on May 29 of that year,

was the summary dismissal of Partridge from his post as Superintendent.¹⁹ This action was the outcome of what appears to have been an internal office feud, in the course of which Partridge was convicted, on evidence supplied by his colleagues, of having cast a serious slur on the financial integrity of the Commissioner.

After Confederation the first Ontario Commissioner, Stephen Richards, turned his attention to tightening up the timber regulations. He strengthened the system of woods ranging, employing twenty to thirty experienced men each winter season to visit the lumbering camps, check timber cut measurements and report to the Crown Lands Department. The rangers had standing instructions "to report generally on any wanton or special waste . . . in connection with lumbering operations, and in case of licensees allowing standing pine through which fire has passed to become lost, instead of utilizing it before it is destroyed by what is termed 'the boring worm' ".²⁰ These wood rangers were not used to fight forest fires, but were later employed in distributing fire warnings in lumber camps and along the railroads.

During the late 1860's and early 1870's the climate of public opinion on the welfare of the forest was beginning to change. In 1864 an American writer, George P. Marsh, had published his stimulating study of forest problems, *Man and Nature*,²¹ in which he traced through history the destructive effects of man's interference with natural resources (forests, waters, wildlife, soil, etc.) in Europe, America and other continents. The influence of this book was widely felt across the North American continent, and helped to activate public interest in forestry and conservation. Again, during the Ontario Parliamentary debates on the contentious Scott timber sales of 1871-2, speeches were for the first time made stressing the need for timber "conservation" in the interests of future generations.²² At the same period a retired naval officer, Captain N. W. Beckwith of Nova Scotia, was writing in the *Canadian Monthly* that "destroying a forest because we want timber is like smothering a hive of bees because we want honey" (a practice, incidentally, which was traditional among beekeepers before the advent of the modern hive) . . . "We are wasting our forests, habitually, wickedly, insanely, and at a rate which must soon bankrupt us in all that element of wealth."²³ Already, however, signs of a more constructive legislative attitude were appearing; for instance in 1871 the Ontario legislature had



AUBREY WHITE, *Assistant Commissioner of Lands and Forests, 1887-1905; Deputy Minister of Lands and Forests 1905-1915*



HON. TIMOTHY B. PARDEE, *Commissioner of Crown Lands, 1873-1889*

passed an Act "to encourage the planting of trees upon the highways . . . and to give a right of property in such trees to the owners of the soil adjacent to such highways."²⁴

When the Hon. Timothy Pardee became Crown Lands Commissioner in 1873, he was faced with a new situation – the onset of a formidable trade depression, the most severe and prolonged that the Ontario lumber trade had yet known.²⁵ The quantity of saw logs, square and waney timber cut on public and private lands, which had risen to its peak of 669,569,542 feet (board measure) in 1872, declined year by year to its lowest level of 270,260,979 feet in 1877. The depression especially affected the square and waney timber section, which remained completely stagnant throughout the decade. To a lesser degree it affected the saw log industry also; but here recovery was sought through a search for new markets overseas.

The depression, sharply reflected in the Commissioner's annual reports on timber during the period, forced both the lumber trade and the Provincial Government to take stock of their methods of business and underlined the need for avoidance of waste and destruction in the forest. In his Annual Report for 1879 Pardee estimated that "one-fourth of every tree cut down to be made into square or waney timber, is lost to the wealth of the country, and . . . the revenue suffers proportionately."²⁶ "The Canadian lumberer, engaged in the square pine business," he said, "should open his eyes to the alarming waste of a material the value of which is increasing every year; in fact, he is stripping his limits and disposing of his timber frequently at a loss."²⁷ He urged lumbermen to turn away from the square timber trade and concentrate their attention on sawmilling operations and the manufacture of sawn lumber. They should export telegraph poles, pit props, rail sleepers and the like to European markets.

Two prominent lumbermen of Montreal, James and William Little, had been saying much the same thing as Pardee for many years past. James Little had published a booklet on *The Lumber Trade of the Ottawa Valley*, in which he pressed government to take action for the segregation of pine-growing lands from lands used for settlement and agriculture. "The Government", he suggested, "should establish large nurseries of young pine on the banks of some of the tributaries of the Ottawa, where seed could be sown and the young plants protected and cared for."²⁸ After a decade of agitation

Little began, in December, 1874, to correspond with Dr. Franklin B. Hough, a versatile writer and protagonist of forestry in the United States. Having persuaded the American Association for the Advancement of Science to take up an aggressive stand in favour of forestry, Hough in 1876 secured the passage through the United States Congress of an Act empowering the U.S. Department of Agriculture to appoint a commissioner to collect information about forestry from all parts of the world. Hough was then appointed their agent for this purpose.²⁹

Another problem that was more and more forcing its attention on Pardee was forest protection. Here also the cry came from the timber heartland, the Ottawa Valley. The whole region had been terribly ravaged by forest fires in 1870 and 1871, at which time a conflagration of gigantic proportion ringed the capital, turning night into day, filling the city with 2,000 refugee farmers and covering it with a pall of suffocating fumes and pea-soup fog, as well as a three-inch layer of dust and ashes. Again in 1877 uncontrollable fires raged through the Parry Sound area. In part these outbreaks were blamed on the rapid construction of railroads and on their wood-burning locomotives.³⁰

In 1870 the Quebec Government had become so concerned over the fire danger that it had passed a Forest Fire Prevention Act which, however, provided no enforcement machinery.³¹ In 1877 Pardee in Ontario caused his Woods and Forests Officer, G. B. Cowper, to prepare a paper on the waste of timber, for submission to the Quebec Crown Lands Department, with a view to possible joint action. However, nothing came of this, since Quebec seemed to prefer to leave enforcement in private hands.³²

At the end of January, 1878, Pardee introduced into the Ontario Legislature a Bill to Preserve Forests from Destruction by Fire.³³ Its introduction seems to have been the result of a hasty decision, since it was not mentioned in the Lieutenant Governor's Speech from the Throne at the beginning of the Session a few weeks earlier. The distinctive feature of the bill was the power it gave the Lieutenant Governor to proclaim certain portions of the Province – those containing valuable stands of pine – to be fire districts. In these districts there would be a 'close season' for fires from April 1 to November 1, during which time special precautions would be taken and enforced by means of penalties against carelessness. Subsequently, two Fire

Districts were proclaimed under the Act – one along the north shore of Lake Huron, extending as far as the French River; the other covering the Algoma area. Pardee was at pains to disclaim any notion that legislation by itself could accomplish much, unless the people living in the affected districts – settlers as well as lumbermen – could be imbued with the necessity for guarding against the fire peril in every way. To achieve this he relied mainly on publicity, through a general proclamation and dissemination of the main features of the Act, by agents of the Woods and Forests Branch, including the wood rangers – but without the necessity of adding to their numbers.³⁴

The Commissioner, then, regarded his Bill as an experiment, which could later be amended. He was rather surprised at the favourable reception it received in Parliament, and at the public interest it aroused. At the close of the Session, the Lieutenant Governor drew attention to the Act in his closing Speech from the Throne. And later, during the fall, Dr. Franklin B. Hough arrived in Canada from New York, and collected information about the new Act – the first of its kind in English-speaking North America – for inclusion in his official forestry report.³⁵

Next year, another force moved into the field – the Ontario Fruit Growers Association. This body, under its energetic secretary, D. W. Beadle of St. Catherine's, was in the habit of debating a wide variety of horticultural and silvicultural topics at its annual meetings, and inviting entomologists, botanists, tree experts and other scientists to contribute papers. In 1879 the Fruit Growers appealed to the Ontario Government to extend its efforts for protection against forest fires.³⁶

At this point, in April 1882, the first American Forestry Congress met in Cincinnati, Ohio, and later adjourned to hold a second meeting in August in Montreal, Canada.³⁷ The Government of Ontario nominated three official delegates to attend the Congress: D. W. Beadle of the Fruit Growers Association, Dr. William Saunders of London, Ontario, Canada's leading entomologist (later to become the first director of the Dominion Experimental Farm, Ottawa) and Professor William Brown of the recently founded Ontario Agricultural College at Guelph.³⁸ Also from Toronto, Commissioner Pardee sent G. B. Cowper to observe the Montreal proceedings. From Quebec too came several unofficial representatives, headed by William Little of Montreal, who played a leading role behind the

scenes in bringing about unity among the three rival bodies that at the time shared the field of forestry in the United States.³⁹ The Congress proceedings, which ranged over the whole vast new field of forestry, are discussed at length in the next chapter of this book. Here, it is sufficient to point out that forest fires figured prominently as a topic in these proceedings and that a joint committee of Americans and Canadians was set up to make representations on forest fire protection to the American and Canadian governments. In due course this joint committee produced a report recommending that four measures be taken: – (a) to reserve all pine and spruce lands, unfit for settlement, exclusively for lumbering purposes (b) to prohibit brush-burning by settlers during May, June, September and October of each year (c) to divide the timber country into districts, and to appoint police, under a superintendent with magisterial powers, to detect and punish offenders and provide for the extinction of fires there (d) to meet part of the cost of maintaining this protective force, by imposing a moderate tax on the owners or licensees of the timber lands.⁴⁰

In his 1882 Annual Report, Pardee had already promised that he would give “the most careful consideration” to these recommendations when they reached him.⁴¹ During the same year his eye lighted on a promising young man who had been working for some time in the Crown Lands service at Muskoka. This was Aubrey White, who had been born in Northern Ireland in 1845, had emigrated to Canada at the age of seventeen and had worked for a time in the lumber business. From 1876 to 1878 he was casually employed by the Crown Lands Department as a woods ranger and later as Crown Lands agent at Bracebridge. His salary in that capacity had been no more than five hundred dollars a year, and when he resigned at the end of 1882, White was glad enough to accept an offer from Pardee, to join the headquarters staff at Toronto as a clerk in the Woods and Forests Branch, at a salary of fifteen hundred dollars.

Before long, White studied the recommendations of the Montreal joint committee, and set about finding a way to translate some of them into practical terms. On March 30th, 1885, he sent the Commissioner a long memorandum outlining in detail a plan for supervising the forests, preventing outbreaks of fire and extinguishing those that assumed dangerous proportions – all at a reasonable cost of five thousand dollars a year. White proposed the stationing, during

the dangerous months of the year, of Fire Rangers at strategic points in the province. These men would be selected by the various timber licensees in the areas affected, but would be subject to the approval, supervision and control of the Department. They would be paid three dollars a day, and given authority as Bush and Fire Rangers to enforce the Fire Act. They would distribute copies of the Act among settlers and residents, and invite their co-operation in carrying it out. They would also keep a constant lookout for fires, extinguish or control them if possible, and if not, would notify the licensee and the Crown Lands Department, by telegraph if necessary, so that help would be sent.

On reading this memorandum, Pardee agreed that the plan was, as its author claimed, "simple, far-reaching and effective, and comparatively inexpensive". He therefore instructed Assistant Commissioner Johnson to put it into effect at once. A circular was sent out to all holders of timber limits explaining the scheme and inviting them to nominate candidates for employment as Fire Rangers, on the terms indicated.⁴² The response was gratifying and during the summer of 1885 thirty-seven Rangers were placed in the field and kept on duty from May 1st to October 1st. According to the Commissioner's Annual Report, "the effect of their presence has been excellent. Fires were suppressed which otherwise might have become vast conflagrations, causing incalculable losses. Persons wantonly violating the provisions of the Fire Act were promptly brought to justice and fined, and a general and strong interest in the direction of preventing the starting and spread of bush fires was created and kept alive." At the close of the season the licensees expressed their great satisfaction at the benefits resulting from the experiment, and urged its continuance and extension. The total cost of the service for 1885 was \$7,911 and the net cost to the Department \$3,955.50.⁴³

Another advance that stemmed from the suggestions put forward at the Montreal meeting of the American Forestry Congress, was the establishment, by the Ontario Government, of a new position of Clerk of Forestry, for the purpose of informing the public on forestry matters. Robert W. Phipps was appointed to the post, which was attached, during his tenure of office (1883-1892), to the Department of Agriculture.⁴⁴ Phipps issued an extensive series of reports emphasizing, among other things, the problems arising from the settlement of lands unfit for agriculture and the value of reforesting these

lands. Up to 1885, however, none of the suggestions calling for forest reservation had embraced the further point of urging the setting aside of areas where wildlife (plant, animal, fish and bird), waterways, scenery and other natural resources besides timber, could be protected and conserved for future community enjoyment. This thought – and in particular that the forest ought to be used for recreation as well as for profit – was the brainchild of a hitherto obscure clerk in the Crown Lands Department, Alexander Kirkwood.

Like Aubrey White, Kirkwood hailed from Northern Ireland. Born in 1823, he crossed the Atlantic in 1846 and after a spell of farming in New York State, entered Canada and in 1854 obtained employment in the Crown Lands office as a correspondence clerk at two hundred and seventy dollars a year. During the next sixteen years he was promoted to the position of Chief Clerk in the Land Sales Section, at a salary of seventeen hundred dollars. Kirkwood's hobby was nature; in 1867 he published a short treatise on milkwoods and nettles, advocating that these plants be turned to industrial use. His land sales work led him also to take an interest in the new territories that were just then being opened up for lumbering and settlement between Lake Huron and the Ottawa Valley. In 1878, in collaboration with J. J. Murphy, he published a useful study of *The Undeveloped Lands of Northern and Western Ontario*, in which he reviewed the prospects and progress of land settlement in those areas.

Gradually Kirkwood found himself developing doubts about the wisdom of government policy in the region. Cutting down the forests on the Pre-Cambrian Shield would, he felt, leave land that was unsuited to farming, and likely to become derelict once the timber had been removed. Could not such land be put to a better use than being turned into 'marginal' farms? Kirkwood knew that in 1872 the Government of the United States had set aside an area of three thousand, six hundred square miles in the Rocky Mountains, to form a "National Park" – later known as Yellowstone National Park. This example had been followed by the Government of the Dominion of Canada in 1885, when it set aside an area of ten square miles in the Rockies to become the nucleus of Banff National Park. Why, Kirkwood asked himself, should not an area in Eastern Canada be set aside for the same purpose, on the height of land



ALEXANDER KIRKWOOD, Chairman of Royal Commission on Forest Reservation and a National Park, 1893

ALGONKIN

FOREST AND PARK,

ONTARIO

LETTER TO THE HONORABLE T. B. PARDEE, M.P.C., COMMISSIONER
OF CROWN LANDS FOR ONTARIO.

Toronto:

PRINTED BY WARWICK & SONS, 26 AND 28 FRONT ST. WEST,
1886.

ALGONKIN FOREST AND PARK, Title-Page of Alexander Kirkwood's Pamphlet, 1886

lying southwest of Lake Nipissing and south of the Ottawa Valley?

This specific district, comprising from twenty to thirty townships, had been suggested to him by R. W. Phipps, who during 1884 had travelled through the Booth timber limits in that area.⁴⁵ Kirkwood had never visited the district in person, but his researches in the Lands Branch, together with Phipps' description, enabled him to visualize what the country must be like.

With the example of Aubrey White before him Kirkwood, in 1885, sat down to pen a letter, or memorandum, to his chief, Crown Lands Commissioner Pardee, explaining what he had in mind. "It is proposed," he wrote, "to set aside a forest reserve principally for the preservation and maintenance of the national forests, protecting the head waters and tributaries of the Muskoka, Petawawa, Bon-nechère, and Madawaska Rivers, wherein it shall be unlawful for any persons to enter and cut timber for any private use, or destroy the fur-bearing animals." It would be necessary to set aside an area covering nine townships or nearly four hundred thousand acres, to carry out his plan. This area would be proclaimed "A National Forest and Park", and given the name of Algonkin (Algonquin) Park, to "perpetuate the name of one of the greatest Indian nations that has inhabited the North American continent."⁴⁶

In Algonquin Park, he continued, the beaver meadows, the tracts of marsh and swamp, the trees and plants, the picturesque scenery of mountain and prairie, the abundant fish and game and, above all, the waterways would be saved from destruction and made available for the public enjoyment in perpetuity. This Reserve would prevent the threatened extermination of moose, caribou, red deer, beaver and other wild animals. No longer would the timber be exploited for private profit; instead, the mature trees would be cut under government supervision, to encourage new growth in their place. Holiday makers would be allowed to rent cottages on the shores of the lakes and fishermen to fish in the waters – but no hunting or trapping would be permitted.

In the peroration of his letter, Kirkwood rose to heights of almost lyrical eloquence:

There is a gloomy grandeur in the natural forest. The noble pines and stately oaks bespeak the growth of centuries. The winds sound solemnly among their branches, and the rooks caw from their hereditary nests in the tree-tops. It is in wandering through such scenes that

the mind drinks deep but quiet draughts of inspiration and becomes intensely sensible of the beauty and majesty of nature. It is here that the imagination of the poet kindles into reverie and rapture, and revels in almost incommunicable luxury of thought.

He concluded with a personal appeal. "The Commissioner of Crown Lands who establishes Algonkin Forest and Park raises a monument that will not crumble nor decay, and his memory will be cherished in the warmest corner of many hearts."*

Pardee did not receive this letter with quite the same enthusiasm that he had accorded to Aubrey White's forest protection letter. He did not exactly rebuff the writer, but neither did he hasten to act on his suggestions. Instead he posed a number of practical questions, to which he wanted answers. How much good timber did the area of the proposed Park contain, and how much water? How much of the land was fit for settlement, and how many people already owned property there? If action such as Kirkwood called for were taken, should it be by the provincial or the federal Government?

By 1886 Kirkwood's patience had worn thin, and he appealed to the public for support by publishing his original letter, with additional details, in an eight page pamphlet. He already had the support of A. Russell, the Crown Timber agent at Pembroke; and now R. W. Phipps, too, referred with enthusiasm to the subject in his forestry reports. Phipps' chief criticism, indeed, was that the area proposed by Kirkwood for the reservation was far too small and should be increased, if possible, to at least one million acres. At this point Commissioner Pardee took action. He turned the matter over to a practical man whom he could trust, James Dickson of Fenelon Falls, an experienced provincial land surveyor who was already engaged in making surveys of some of the townships specified by Kirkwood for inclusion in his Park. He instructed Dickson to tour through the other unsurveyed townships in the area and report on the feasibility of the Park plan.

Fortunately Dickson was sympathetic to Kirkwood's ideas, especially his pleas for the conservation of wildlife and the use of the Park for recreation. Dickson added several new ideas of his own, including mapping the Park and making access to it easier for

*The monument actually erected took the form, more justly, of a cairn in Algonquin Park, dedicated to the memory of Kirkwood himself.

visitors by marking out trails and providing a guide book. He strongly urged that all hunting in the Park be prohibited and that the wolf population be reduced; that indiscriminate trapping be stopped and steps taken to increase the dwindling beaver population by re-stocking. Finally, he recommended the appointment of a head keeper and a small staff to enforce the restrictions on hunting and trapping and to take precautions against fire. They should be given power to punish offenders on the spot and confiscate unlawful gear.⁴⁷

Kirkwood's vision and Dickson's practical wisdom had succeeded in making out a good *prima facie* case for the proposed Park, for which public support was growing. An encouraging sign of this was the Government's decision in 1887, to create a small park at Niagara Falls, to assure the right of the public at all times to view this colossal wonder of nature. Queen Victoria Niagara Falls Park, as it was then called, became the nucleus of the later (1927) Niagara Parks System, which took in Queenston Heights and other nearby historic sites; it was administered by a Commission.

Queen Victoria Park was a sophisticated example of the Parks idea; but it did not directly promote the type of wilderness park advocated by Kirkwood. The next step was to set up a formal commission of enquiry to make the necessary recommendations. In 1887, on the death of T. H. Johnson, Aubrey White, a well-known believer in Kirkwood's plan, was promoted Assistant Commissioner in Johnson's place; but two years later Commissioner Pardee himself died and under his successor, the Hon. A. S. Hardy, progress was slowed down. The delay was utilized by Kirkwood to collect a mass of information on forestry practices and forest management in other countries; and by Dickson to survey further townships for inclusion in the Park area. At last in 1892 the Ontario Government set up a Royal Commission on Forest Reservation and a National Park. Its members were Alexander Kirkwood (Chairman), Aubrey White, James Dickson, Archibald Blue, a mining inspector and R. W. Phipps, the Clerk of Forestry in the Department of Agriculture. Thomas W. Gibson was the Secretary.

In their Report the Commissioners uttered a solemn warning that "the wholesale and indiscriminate slaughter of forests brings a host of evils in its train."⁴⁸ "It turns fertile plains into arid tracts, dries up springs and streams, denudes the soil and diverts life-giving rain-

From this warning the Report went on to state the main aims of fall into wasteful floods." Accordingly, "the waste of one generation must be atoned for by the enforced economy of the next."⁴⁹ the plan to establish a Forest Reservation and National Game Preserve in Ontario. These were:

- (1) to maintain the water supply,
- (2) to preserve the primaeval forest,
- (3) to protect the wildlife,
- (4) to undertake experiments in forestry,
- (5) to make provision for health and recreation,
- (6) to secure for the surrounding regions the advantages of climate and water supply that retention of a large block of forest could give.

The most suitable territory for all these purposes was "a compact tract of land in the district of Nipissing, south of the Mattawa River and lying between the Ottawa River and Georgian Bay . . . almost a parallelogram in shape," consisting of eighteen townships with an area of thirteen hundred square miles of land and one hundred and sixty-six square miles of water. This tract formed part of the great forest which once covered the whole of Ontario. In spite of past forest fires and lumbering operations, the area was still thickly wooded with hardwoods such as black birch, maple, hemlock, ironwood and beech, as well as extensive stocks of red and white pine. The land itself had little agricultural value, the soil being rough, broken and stony. It included, however, "an immense volume of water, in lake and river, brook, pond and marsh", which provided a home for "a vast variety of birds, game and fur-bearing animals and fish."⁵⁰ Two of the Commissioners, Dickson and Phipps, had first-hand knowledge of the area and their information pointed to the conclusion that "the District is in every way suitable for the purposes alike of a Forest Reservation and a National Park."

Most of the area had long been under licence to lumbermen to cut the pine. Their rights must be respected, but they must be discouraged from cutting other species of trees. The latter were so numerous that "even were the pine trees wholly removed the utility of the forests in their climatic, water-maintaining and other aspects would probably not be impaired."⁵¹ In one respect, the preservation



The pleasures of solitude. Moonlight canoeing on Lake of Two Rivers, Algonquin Park

of game and wildlife, the smaller deciduous trees would be preferable to a pine forest. The Report praised the recently instituted system of provincial fire-ranging and advocated reinforcement of its effectiveness through the activities of the future Park staff as well as by the prohibition of all settlement therein.

"More advantageous circumstances under which to take action of the kind contemplated could not exist," the Report continued. "The land is certainly public land; there are no settlers upon it, except one or two squatters; no rights, whether of fishing, hunting or anything of the kind, have been granted; in fact with the exception of the lumbering operations . . . and the fires which have swept over considerable parts of it, nothing has been done to change its condition from that of the untouched, primeval forest."⁵² Only the wildlife of the Park had suffered serious depletions. "Here not many years ago," they declared in a burst of eloquence, "the moose, monarch of the Canadian woods, roamed and browsed in large numbers . . . here herds of red deer grazed in the open meadows or quenched their thirst at the brooks or crystal lakes; here the industrious beaver felled his trees and built his dams on every stream; here the wolf's detested howl startled the deer, and the bear pushed his black bulk through the undergrowth in search of ripe nuts or berries."⁵³ To restore these former glories, the Commissioners proposed a ten-year ban on all hunting, shooting and trapping; the limitation of fishing to angling with rod and line; the restocking of streams, preservation of native shrubs and plants and introduction of new species; and the protection of game animals and their encouragement to breed. On the other hand, no land would, in future, be alienated to private ownership. No villages would be allowed to spring up; but for recreational purposes only, a few summer residences might be erected on short term leases.

Upon presentation of the Report, the Ontario Legislature lost no time in taking action. During the session of 1893 an Act was passed establishing Algonquin Park as "a public park and forest reservation, fish and game preserve, health resort and pleasure ground for the benefit, advantage and enjoyment of the people of the Province."⁵⁴ Naturally, the Crown Lands Department became responsible for administering the Park; and in July an Order in Council appointed Peter Thompson of Brussels, a builder of roads and bridges, first Superintendent of the Park. Meanwhile, before

the end of 1893, the precaution was taken of disposing of all merchantable timber remaining in the Park area.

With the acceptance of the three new ideas described in this chapter – conservation, forest reservation and forest protection – the work of the Department began to expand greatly in scope and importance. The next problem to be faced was the acquisition of the diverse skills and specialized scientific knowledge necessary to carry the work forward.

PART III: WIDER RESPONSIBILITIES

1901-1940

10

THE RISE OF FORESTRY



At its winter meeting in 1880 the United Fruit Growers Association of Ontario heard Benjamin Gott, of Arkona, bitterly deplore the “sad and merciless havoc made upon them (our forests) for the base and meagre considerations of the present hour. How far from our serious thoughts of the future are the considerations of preservation, economical use, culture and propagation applied to our forests! . . . If something is not speedily and effectually done . . . we shall, before many years have swept their onward course, find ourselves compelled to forever inhabit a dismal treeless waste and an unfruitful region.”¹

In this appeal Gott was echoing sentiments uttered by one voice after another across Ontario during the previous quarter of a cen-

tury. Since 1854 Ottawa lumbermen had proclaimed the need to classify land as for agriculture or for permanent forest.² In 1865 Crown Lands Commissioner Campbell, ahead of his time, had advocated the cropping of timber on a rotation basis, as in Scandinavia.³ In 1868 investigators had protested against the massacre of hemlock trees for the use of their bark in tanning. In 1879 Crown Lands Commissioner Pardee had inveighed against the wastefulness of the square timber trade.⁴ He at least had taken one remedial step when, in 1878, Ontario had passed the first legislation to protect the forests against fire.

The long delayed answer to Gott and his fellow complainants came in 1882, when the American Forestry Congress met in Cincinnati and Montreal. This, the first "parliament" of forestry in North America, served to focus all the hopes and criticisms that had been freely ventilated for so long on both sides of the border. At the same time it established a platform for leadership by outstanding forest experts such as Dr. Benjamin Hough and Dr. B. E. Fernow. A ferment of ideas, some derived from European sources and others from North American experience, found expression at the Congress. At its two meetings over one hundred papers were presented by politicians, public servants, forest and farming experts, lumbermen and interested laymen.⁵ In their papers and the discussions which they evolved can be found the seeds of most later forestry ideas and practices. They were not always clearly formulated at the time; for this was a congress of enthusiasts, where men were preaching to the converted. All were interested, not so much in discussion and debate, as in putting across a message to the world. Many of the emotion-charged 'facts' they used to support the message have since been disproved; but the principles which underlie them are still today the basic principles of forestry.

The theme most commonly expounded at the Congress was ecological. Speaker after speaker proclaimed that man was destroying nature's beauty, harmony and balance; that wanton destruction of the forests was altering the climate, producing tremendous soil losses by erosion, causing destructive floods and driving away wildlife.⁶ This argument was usually couched in highly emotional language. A second theme, easily linked with the first, was that the supply of merchantable timber in Canada and the United States was nearly at an end.⁷ Those who took this line argued that fire,

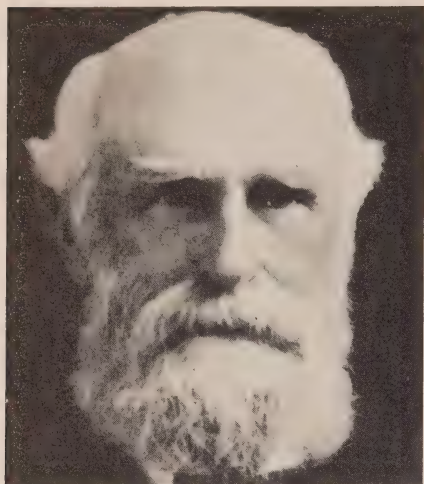
wasteful cutting practices, poor wood utilization and improper land clearance were combining to wipe out the great North American forests. Some speakers, however, distinguished sharply between the two themes, rating the first as too emotional and stressing that the second embodied sound business economics.⁸ This distinction, perhaps necessary when the case for forestry was first being put to "practical businessmen", has increasingly faded in recent years as the two themes have grown together in modern concepts of multiple land use.

Corresponding to the two themes were two fundamental purposes: first, to preserve existing forest benefits of all sorts; second, to restore those benefits that had already been lost. Both, to a considerable extent, called for governmental action. To make this possible, it was necessary first to create an enlightened public opinion.

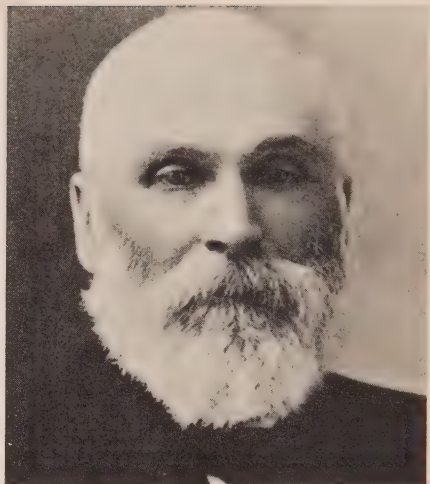
The Congress believed that the general public still thought of the forests as inexhaustible and that citizens were insufficiently concerned with the problems of forestry. Accordingly, many proposals were put forward for supplying more information and developing stronger propaganda, so as to bring public opinion to a better understanding of the value of forestry practices and a greater willingness to spend money on them. In order to dramatize the issues the Governor of Ohio, at the time of the Cincinnati meeting, proclaimed that "Arbor Day" (which had been inaugurated in Nebraska in 1872) should henceforth be celebrated in his State. Such "days" gradually spread all over the Continent during the next few years. Other specific propaganda campaigns launched at this time included short courses for farmers, lectures in schools and the issue of government publications on forestry.

Besides these propagandist activities, the Congress put forward various practical proposals for future work. Of these, protection of the existing forests was the most urgent.⁹ Many speakers urged better cutting practices, emphasizing the diameter limit as the first step. Some carried this point much further and envisaged a sort of continuous thinning method, as developed in Europe for harvesting trees.¹⁰ Land classification, involving the segregation of forests and agricultural land, was accepted as fundamental; the Ontario delegates' first recommendation was that their government should reserve all non-agricultural lands as permanent forests.¹¹ Everyone

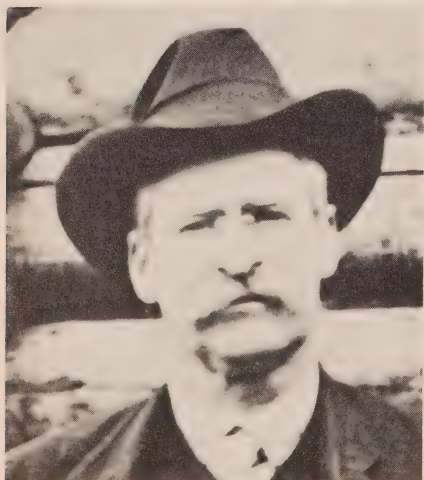
FOUR MEN OF IDEAS



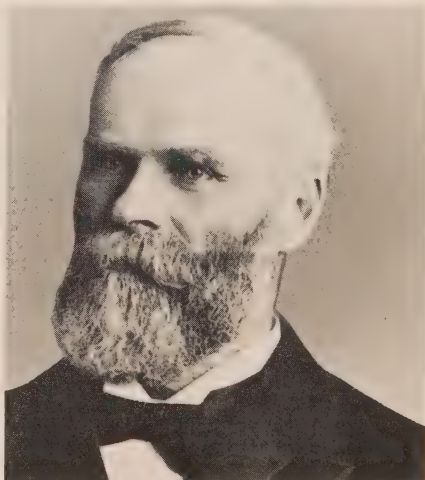
WILLIAM LITTLE, prominent Montreal lumberman, led unofficial delegation from Quebec to Montreal meeting of American Forestry Congress in August, 1882



JAMES DICKSON, O.L.S. Inspector of Surveys under Crown Lands Commission. Member of Royal Commission on Forest Reservation and a National Park, 1893



THOMAS SOUTHWORTH, Clerk of Forestry 1895-99. Director of Bureau of Forestry 1899-1905



HON. E. J. DAVIS, Commissioner of Crown Lands 1899-1904. Sent out survey parties to explore the north

agreed that wood was being wasted unnecessarily, especially in the square timber and hemlock bark trades which, it was said, should be restricted.¹² Farmers were strongly urged to protect their wood lots from grazing animals.¹³

These measures, in the opinion of Congress speakers, would go far towards putting the existing forests on a basis better oriented towards long-range forestry. But much more had to be done, especially in the direction of creating new forests. Speaker after speaker urged the necessity of planting more trees, especially on farms.¹⁴ The farmer could restore nature's balance and make money in the process, by planting trees on his non-arable lands.¹⁵ Many speakers contended that up to twenty-five per cent of every farm should be kept under forest cover. Few argued for extensive planting in the forests proper; the scale of such an operation would be too great. In any case, much hope was held for natural regeneration, if proper forest conservation and "conservative lumbering" were practised.¹⁶

There was general agreement that more trained personnel would be needed, to carry on the propaganda and provide for forest protection and tree planting programmes.¹⁷ Furthermore, there would have to be much more study of the forest itself.¹⁸ Here the Congress called for more government aid, to establish experimental stations and plantations; and urged that greater emphasis be laid on forestry in the curricula of universities and agricultural schools.

Thus the Congress laid down a fair blueprint for progress in the field. There were not many present at the gathering who could expect to devote their full time and energies to implementing the grand forestry design, embodied in a programme of fifteen recommendations submitted by the Ontario delegates. Yet, little by little, pragmatically, men began to put some of the specific measures into operation. For example, Ontario was soon to have Arbor Days, short courses, unmanaged forest reserves, and a government official to encourage forestry. In time, one thing would lead on to another; more people were being drawn into the field and trained for the work.

The first positive result of the Congress in Ontario was the creation of the new office of Clerk of Forestry under the Department of Agriculture. This post in time grew to be a Bureau with a small staff. Ultimately, it pointed the way to the formation of a Forestry Branch within the Lands and Forests Department. Meanwhile,

Professor William Brown, one of Ontario's delegates at the Congress, returned to Guelph to continue a few courses of study and some demonstration and ornamental forestry work at the Ontario College of Agriculture. Years later, early in the next century, under the inspiration and leadership of Dr. B. E. Fernow, a Faculty of Forestry was established in 1907 at the University of Toronto. Before long the University was beginning to turn out thoroughly trained specialists who were ready to devote their full time to the forest and its management. At this point forestry would be transformed into a full-scale profession.

Comparable developments were also taking place at the Dominion level, in Quebec, the Maritimes and Western Canada and in the United States Federal Government and States Governments.¹⁹ In 1900, on the initiative of Elihu Stewart, Dominion Chief Inspector of Timber and Forestry, the Canadian Forestry Association, a layman's association was founded.²⁰ This body played an important part in bringing to public attention the need for a school of forestry. Subsequently, with the growth of a forestry profession came the establishment of professional societies, such as the Society of American Foresters in 1900, and the Canadian Society of Forest Engineers eight years later. The first journal for the profession, Dr. Fernow's *Forestry Quarterly*, made its appearance at Cornell University in 1902.

Thus, from 1882 onwards, forestry in Ontario was expanding steadily, as part of a growing forestry community throughout the entire North American Continent. This expansion, though slowed down by two world wars and checked by the intervening trade depression, has continued ever since.

To fill the position of first Clerk and Forestry the Ontario Government (as already indicated) had appointed R. W. Phipps in 1883. Phipps was a short stocky man of restless energy and rapid movements. He had written political pamphlets for the Conservatives and Liberals in turn, before settling down as a staff writer for the *Toronto Globe*. Now in his fiftieth year, he was keenly interested in forestry and farming; he had made a study of soil conditions in Ontario, owned a farm in Grey County, grew apples, and finally made his home in Toronto, where he owned three houses in Richmond Street West. He must have been a colourful character, inspiring at least one of his personal friends to an elegiac appreciation of his capacities:

"Lo! in Toronto West high towers the Phippsian fortress
 Where the erudite chief clerk of the Forestry lives . . .
 There does he speak wise words about all trees of the forest –
 Walnut and oak, birch, pine, cedar and maple and elm."
 There to conserve the woods does he teach the ignorant farmer,
 Showing its forest fringe, shelter and shield of the farm,
 Telling the fairy tale of science taught by the woodland."
 etc.,²¹

In the year of his appointment, the Ontario Government passed a Trees Act, which provided a bonus for municipalities that agreed to plant trees.²² The attachment of Phipps to the Department of Agriculture and the concern for tree planting in an organized way indicated the Government's concern to develop forestry in the settled areas of the Province. In this it was following one of the lines of action which had been urged at the Congress. (Two years later, it followed another of these lines when it proclaimed Arbor Day for the schools, to dramatize the idea of forestry to school children, who were the public of the future. In the same year, 1885, it took up a third basic line of action, by introducing effective implementation of the seven-year-old fire protection legislation. Since the Trees Act was never effectively carried out,²³ the Government's programme was really one of protection and propaganda.) Phipps' job was to concentrate on propaganda, primarily through making an annual Report, which included excerpts from articles and opinions on every topic likely to interest the forestry-minded of the day. It dealt with farm forestry developments, government programmes, timber-cutting methods, urban beautification techniques, forest protection systems and a great deal more. The publication was missionary-like in tone and popular rather than technical in style. It must have reached a sizeable audience, since over eight thousand copies of it were given away in 1885 alone.²⁴

Apart from the preparation of these annual reports, Phipps contributed many letters and articles to the provincial press; nearly seven hundred of his letters were first published in 1885.²⁵ In addition, he gave talks to all sorts of groups, and travelled extensively to gather first hand information.²⁶ In 1884 he visited the area that later became Algonquin Park; in 1885 he travelled widely in the United States; and two years later he spent some months in Europe. He also carried out a few special studies for the Department of Agriculture.

His ideas were not his own; he was rather a mouthpiece disseminating the views expressed at the 1882 Congress. Usually his reports dealt mainly with farm forestry, and to a lesser extent with forest reservation, "the setting apart of a portion of territory for forest exclusively."²⁷ He had no direct authority, but took an active part in supporting Kirkwood's campaign for Algonquin Park and shares the credit for working the idea into a practical and acceptable shape.²⁸

Phipps published his last report in 1892 and died in 1894; but, for reasons that are not clear, no successor was appointed until 1895. Then the Hon. C. F. Fraser was named Clerk of Forestry, but died within a few months. In his place Thomas Southworth, editorial writer and later manager of the *Brockville Recorder* was named to the position, which was now transferred to the Crown Lands Department. The transfer was interpreted by Southworth himself as a sign that the Government was determined to bring forestry closer to the forest.²⁹

Southworth came of Puritan stock; the *Methodist Witness* described him as "a man of wonderful energy, and splendidly endowed for his work."³⁰ His first task was to carry on the general information work begun by Phipps; but from the outset he placed more emphasis on timber lands than on farm forestry. Throughout his career he stressed the need for forest reserves, the observance of the twelve-inch diameter limit for timber and the improvement of forest protection.³¹ He made special studies of the working of the Trees Act and the observance of Arbor Day in the schools;³² and these reports influenced the re-enactment in 1896 of the Trees Act as the Ontario Tree Planting Act.³³

In later years, when the pulp and paper industry was beginning to grow, Southworth became increasingly involved in Government forest reserves policy. This began with his 1896-97 survey of white pine regeneration which, though not a very thorough examination of the problem, did at least assert that regeneration was possible, given adequate protection.³⁴ This positive viewpoint was instrumental in leading the Ontario Government into a large-scale forest reservation programme. Southworth claimed that his report led directly to the setting up, in 1897, of the Royal Commission on Forest Protection in Ontario. This Commission, whose chairman, E. W. Rathbun, was known as a progressive lumberman, included

Southworth and Kirkwood among its members. It recommended an extension of fire-ranging, the bringing of all fire-rangers under Crown Lands control, and the creation of further forest resources.³⁵

Following the Commission's report the Legislature passed the Forest Reserves Act, giving the Lieutenant Governor in Council "power to set apart such portions of the public domain as may be deemed advisable for the purposes of future timber supplies."³⁶ Soon, and for some years thereafter, Southworth was deeply involved in the surveys for, and the creation of, the Eastern, Sibley, Temagami and Mississauga Forest Reserves.³⁷ Before each reserve was created, he travelled through the area assessing its suitability. His general theory regarding the reserves was that it was necessary to act quickly to save the forest land and to leave the details of management to the future. He assumed that, in time, more intensive work would become economically feasible; but for the time being he was content if at first only one or two fire rangers were all the administration that a reserve had.³⁸

In 1898, almost simultaneously with the passing of the Forest Reserves Act, Southworth's office of Clerk of Forestry was enlarged into a Bureau, of which he himself was appointed Director. The significance of this promotion was underlined in the following year when, in collaboration with his chief, Aubrey White, he produced his *History of the Crown Timber Regulations from the date of the French Occupation to the year 1899*. This basic collection of documents was first published in the Annual Report of the Forestry Bureau and has since been reprinted several times. It has served as an invaluable source book for the writing of the present history.

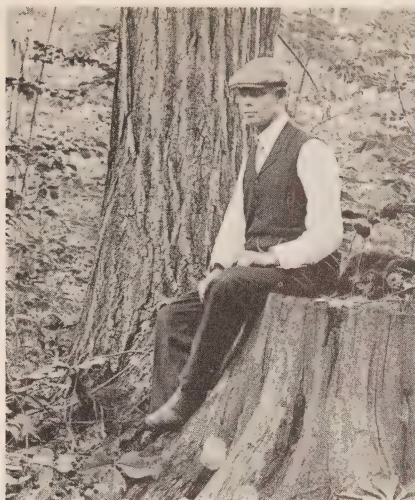
Fernow, in an article a few years later, actually credited Southworth with being the founder of Ontario forest policy.³⁹ While the forest reserves were his main interest at first, he was not unmindful of the other forestry needs of the Province. As more reserves were established, he began to feel that perhaps enough had been done, for the time being, for the northern forests; it was time to pay more attention to those regions in the north where settlement was developing.⁴⁰ Hoping to avoid the over-clearing of land that had taken place in the south, he began to favour the idea of making small forest reserves in the Clay Belt, which had just been discovered as a result of the northern exploratory survey of 1900. Southworth urged the Government to hold back from settlement certain suit-

able areas in this region on the ground that, if this were not done, the settlers would clear every tree from their own lands to get cash. He continued to take a keen interest in northern land settlement during 1903 and succeeding years.

At this time, in 1903, Dr. Fernow caused a sensation in forestry circles by delivering a series of lectures at Queen's University, Kingston, which have been described as a Canadian event whose importance "surpassed in many ways . . . the American Forestry Congress of 1882."⁴¹ Fernow's course ranged over every aspect of Canadian forestry – including resource management, tree-cropping, silviculture, lumbering, forest economy, wood characteristics, forestry practice, etc., – in such a way as to provide, when published later in book form (eighty pages) a succinct manual that has been used for the education of subsequent generations of foresters and others. These lectures strongly stimulated the movement for setting up, at Canadian universities, one or more schools for giving professional training in forestry. Southworth threw his energies into this movement, corresponded with lumbermen to find out their views, and conveyed them to the university authorities.⁴²

Forestry in Ontario was now ready for a fresh experiment, the appointment to the government service of a full-time professional forester. Chosen for the job, with Southworth's concurrence, was Judson F. Clark, a graduate of Ontario Agricultural College in agricultural science (1896) who had afterwards moved to the United States, where he studied forestry under Dr. Fernow at Cornell University, took his degree there and served as Professor of Forestry. Clark was a man of broad educational background, and had travelled in Europe to visit the principal forests. Being a capable teacher and an able forester, he was expected to bring to Canada the latest forestry practices of Europe and the United States.⁴³ In 1904 he joined Southworth in the Bureau of Forestry, and immediately took over most of the responsibility for forestry in southern Ontario, leaving the Director free to concentrate on the north, where by now his chief interests lay.

By 1905, then, the Bureau of Forestry was showing considerable interest in agriculture and settlement; Clark in southern Ontario and Southworth in northern Ontario. In that year the long era of Liberal ascendancy in Ontario politics ended, and the Conservative Government of Sir James Whitney came in, committed to a policy



DR. JUDSON CLARK, *the first Provincial Forester, in Algonquin Park*

of developing "New Ontario." With his knowledge and interests Southworth must have been a natural person to place in charge of an expanded northern colonization programme. Hence in 1905 the Bureau of Forestry became the Bureau of Colonization and Forestry and was transferred back to the Department of Agriculture. Thereafter, Southworth's major efforts were no longer directed towards forestry, though later he served as president of the Canadian Forestry Association, which he had helped to found in 1900.⁴⁴

Even before the Bureau's transfer out of the Lands and Forests Department, the position of Judson Clark had become difficult, if not untenable. Fernow described him as "a very aggressive man, with decided opinions and views . . . bound to do something of a practical nature in forest work."⁴⁵ Clark had just expounded his "radical" views in a paper, which he read to a forestry conference called together by Sir Wilfrid Laurier.⁴⁶ In this he criticized the current system of timber disposal and advocated the adoption of regulations that would limit logging operations by forcing licensees to dispose of forest debris, as a measure of fire prevention and forest reproduction. He followed this by an even more controversial utterance, calling attention to the shortcomings of the prevailing Doyle Scale for measuring timber, a scale which admittedly in cer-

tain important respects favoured the lumbermen at the expense of the government revenue. Clark proposed to substitute for it a new scale devised by himself to be known as the International Scale.⁴⁷ In advocating this change he brought down on himself the opposition of the lumber interests and received no backing from his chief, Aubrey White. Finding that he could make no headway in introducing forest management principles and that "there was nothing expected of him except to talk",⁴⁸ soon after the transfer of the Bureau he resigned his position as provincial forester in 1906 and took a post with a private lumber company in British Columbia. Clark prospered in business and eventually became secretary-treasurer of the British Columbia Timber and Forestry Chamber of Commerce.

In Ontario no successor to Clark was appointed for the next six years, and meanwhile forestry in the Province had to make progress through other channels. On March 28th, 1907, the Board of Governors of the University of Toronto decided to establish a faculty of forestry and on the same day invited Dr. Fernow, who had gained a continental reputation by his work at Cornell University, to become its dean. This was the first forestry school in Canada, providing a four-year course leading to the degree of Bachelor of Science



First Forestry Class held in Rondeau Park, 1908. On the left, Dr. J. H. WHITE and Dr. E. B. FERNOW. On the right, A. H. D. ROSS, P. W. DWIGHT and MITCHELL

in Forestry.⁴⁹ From the beginning it maintained a close connection with government forestry.

The School's philosophy was well suited to the Government's needs. Throughout his career Fernow emphasized that forestry was sound practical business; his graduates would do likewise. At the same time, in his writings, he placed the greatest stress on public policy;⁵⁰ he was committed to a philosophy of public service and to a long-range perspective which he did not think industry was capable of taking.⁵¹ He was also convinced that the one sure way to secure a successful application of forestry principles was to build up a skilled profession of foresters.⁵² It was the University's job to teach and train the experts who would, in time, bring about the triumph of forestry.

For the first twenty years of the faculty's existence, nearly all of its graduates wound up in government employment. But even before it produced any graduates, the faculty, from the outset, played a part in promoting the growth of provincial forestry, through becoming involved in government surveys, extension work and applied research immediately relevant to forest problems. Thus, in 1912, Fernow directed the Trent Watershed Survey for the Dominion Commission of Conservation, and made a study of conditions in the Clay Belt for the Provincial Government. Almost every faculty member since then has done at least some work in government service. The most significant of all these, from the Department's point of view, was Dr. J. H. White, the faculty's first graduate, who joined the teaching staff in 1909. Dr. White served as a connecting link between the forestry of the University and the forestry of the Department, gaining the confidence of both.

Temperamentally, the dean of the faculty, Dr. Fernow, and the administrative head of the Lands and Forests Department, Aubrey White, were poles apart. Fernow, with his Prussian thoroughness and zeal, his abrupt manner and critical attitude, his interest in philosophy and music and his familiarity with international scientists and their gatherings, had little in common with Aubrey White, the cool capable administrator steeped in the traditions of the British civil service and of English business methods. The Judson Clark episode made White cautious about employing another professional forester trained by Fernow. He waited for the right man to turn up with the right connections, training and temperament.

The initiative accordingly passed to another provincial institution, the Ontario Agricultural College at Guelph. A lean, sturdy young man of Quaker Loyalist stock, Edmund John Zavitz, brought up on a farm at Ridgeway in the Niagara Peninsula, had graduated at McMaster University in 1903.⁵³ One evening he attended a meeting of the Canadian Forestry Association, where he met Southworth and Clark, who encouraged in him a nascent enthusiasm for forestry. This interest led him, the following spring, to the Ontario Agricultural College, where forestry had taken modest roots under the encouragement of farmers' groups such as the Fruit Growers' Association and the Experimental Union.⁵⁴ The Union, whose chairman C. A. Zavitz was a distant relative of young E. J. Zavitz, consisted of graduates of the Agricultural College who had gone back to the farm. Its chief task was to test, on the farms, new crops and new methods of cultivation. The Union had a reforestation committee whose members included Nelson Monteith, later Minister of Agriculture, and the future Premier of Ontario, E. C. Drury. Finding the atmosphere congenial, E. J. Zavitz put in a summer's work at Guelph, planting a small nursery of forest seedlings. In 1905 he took his Master of Science degree in forestry at Michigan University; and later the same year he strengthened his personal ties with the farming community by his marriage to Jessie E. Dryden, the daughter of former Minister of Agriculture John Dryden. In the fall of 1905, Zavitz was appointed lecturer in forestry at the Ontario College of Agriculture. He remained at Guelph for the next seven years, teaching and becoming increasingly involved in government plans for tree-planting in the Province.

From the outset Zavitz laid great, though not exclusive, stress on farm forestry.⁵⁵ He developed the College's tree nursery into a cooperative planting project, under which farmers were given trees to plant in demonstration shelter-belts and wastelands plantations.⁵⁶ This brought him face to face with the major problem of what ought to be done with the many large derelict areas of sandy waste in southern Ontario. He was particularly interested in South Norfolk,⁵⁷ above all in the historic Normandale plains where Governor Simcoe had long ago planned to locate the military centre of the western district of the Province. Now the area was a desert but capable, thought Zavitz, of being restored through reforestation. Another such area was in County Simcoe, where E. C. Drury took



DR. BERNHARD E. FERNOW, first Dean of the Faculty of Forestry, University of Toronto, 1907



EDMUND JOHN ZAVITZ, father of forestry in Ontario, Deputy Minister of Forestry 1925-34, then Chief Forester until retirement in 1953

Zavitz on a two-day trip by horse and buggy over the Angus plains, and where the J. B. Smith Lumber Company held some seven thousand acres containing the remnants of a large stand of red pine.⁵⁸ Smith offered to sell this land to the Government at three dollars per acre, but the Minister of Agriculture felt the price was too high.

Out of this trip and others through Durham, Lambton and Prince Edward Counties, came the publication by the Ministry of Agriculture in 1908 of Zavitz's pioneering *Report on the Reforestation of Waste Lands in Southern Ontario*.⁵⁹ That same year he was allowed to purchase a hundred acres of abandoned farm land in Norfolk County as a new site for the Ontario Agricultural College nursery work. Here he began full-scale waste land reclamation work, while continuing to grow trees for farm and waste land planting in other parts of the Province. "This modest beginning initiated what was to be the Forestry Stations of today."⁶⁰ For the first time one of the Province's forest "experts" was able to devote more time to the practical business of reforestation than to propaganda on behalf of forestry.

Soon Zavitz began to carry out occasional special assignments for the Government. Thus, in 1907 he accompanied a party which included the Ministers of Agriculture (Hon. Nelson Monteith) and Lands, Forests and Mines (Hon. Frank Cochrane) and Thomas Southworth on a trip to locate a site for a proposed experimental farm in the Clay Belt.⁶¹ In 1908 he was sent to mark the merchantable timber in Rondeau Park. After a visit, he warned the Minister of Lands and Forests that cutting the timber in the Park would arouse a lot of public criticism.⁶² He was directed to continue with the work; but before it was half done, a storm of press disapproval sprang up, with political implications. Frank Cochrane and Aubrey White then visited the Park in person, and afterwards abandoned the cutting project.

Aubrey White was now beginning to show an interest in the young forester, whom he took with him that year to Washington to attend a special forestry congress called by President Theodore Roosevelt.⁶³ The same fall Zavitz was employed by Dean Fernow to lecture on dendrology at the new Forestry School at Toronto. By this time, therefore, Zavitz was not only rapidly developing his basic reforestation programme, but was also acquiring a general reputation in government circles.

Given these extra-curricular contacts and responsibilities, it was a natural step for him to be transferred in 1912 from Agriculture to the Department of Lands, Forests and Mines as its first Provincial Forester.⁶⁴ He brought with him his O.A.C.-developed programmes and was given a second forester, F. S. Newman, to supervise his Norfolk nursery and plantation. But he found that his main new responsibilities in the Department were to be connected with Aubrey White's chief achievement, fire protection. At the end of 1912 Zavitz was appointed Inspector (without salary) to the Dominion Railway Board, to see that protection against forest fires was assured on all railways running through forest areas.⁶⁵ The work included inspecting locomotives and rights-of-way, and was carried out by a staff of six under Clyde Leavitt, a Michigan forestry graduate. The importance of this development lay in the fact that, over the years to come, foresters were to win their effective recognition in the Department through their work for the fire protection service.

Zavitz had not been long in his new position of Director of Forestry when World War I broke out. In the second year of the war Aubrey White, so long the dominant figure in the Department, died; and with him ended a whole era of its history. The Government found it difficult to name his successor. No member of the Department was promoted to be Deputy Minister; instead a political appointment of an outsider was made. Albert Grigg, the Conservative MPP for Algoma Riding, a tall, silver-tongued orator from Bruce Mines, accepted the post. Grigg was a self-made business man, who before entering provincial politics served as the first mayor of Bruce Mines. He was hard-working, frugal to the point of parsimony, a lover of horses and dogs and known to his friends as 'Honest Albert'. He knew little or nothing of forestry or lumbering, and cared less; he once told Zavitz that he had taken on the job "to provide for the education of his three children."

At this time Zavitz lost his first assistant, Newman, for the duration of the war; but in 1917 he gained, in Newman's stead, valuable new help in the person of Dr. J. H. White, the first graduate of the Faculty of Forestry. White, already a good friend of Zavitz, now began a thirty-month official collaboration which defined the programmes and priorities of work for the newly established Forestry Branch for the post-war years. As the two men worked it out, there would be three basic lines of policy.⁶⁶ The first, concentrating on

regeneration, would continue Zavitz's southern Ontario reforestation work. The second, based on the Forest Fires Protection Act of 1917, would deal with fire protection – a problem that had to be solved before any serious northern forestry could be made worthwhile.

This Act, besides greatly extending the scope of the fire prevention service, radically reorganized its administration by removing it from the supervision of the Woods and Forests Branch and putting it under the direction of the Provincial Forester. Zavitz, now officially given this title, became responsible for carrying out the Act, with the aid of a paid staff. White served as his right-hand man, in organizing the thirty-four districts into which the area under protection had to be divided. These districts, each under a chief ranger, were set apart from all other field agencies of the Department, and were to report direct to Zavitz.

The third line of their policy was to gather information, primarily through a surveys programme designed to provide a basis of knowledge about types and supplies of timber throughout the Province. This knowledge was desirable if the district organization for fire protection was to be rationally framed: it was essential to the making of decisions regarding the extent of the new pulp limits. How much of this programme represents White's work and how much Zavitz's can never be determined; the two men had complementary interests that combined to produce a broad and balanced view of the Province's forestry problems and needs. If Zavitz was perhaps inclined to be more concerned with southern Ontario, White leaned more to the problems of the north.

Soon after the end of the War, the School of Forestry at the University of Toronto began to turn out a crop of graduates who became available for forestry work in all parts of Canada, including the Dominion and Ontario forest branches. On the register of students in the faculty for 1919-20 appear the names of many (such as A. R. Fenwick, J. A. Brodie, F. A. MacDougall, J. F. Sharpe) who later rose high in the Lands and Forests service.⁶⁷ At this stage only a few (such as R. W. Lyons) found employment with the lumber and pulpwood companies. This was a gradual development during the following decade.

The post-war economic and political climate was very favourable to the development of new forest programmes. Economic expansion in general, and expansion in the pulp and paper industry in particu-

lar, helped the work forward. In politics the war period saw the rise of the United Farmers of Ontario party, leading up to the formation of the U.F.O. Government of 1919-23 under Premier Ernest C. Drury. He was an old friend of Zavitz and at once authorized him to establish new reforestation centres in Simcoe County.⁶⁸ However, forestry progress in other directions was not so fast as had been expected, largely because the new Government soon became absorbed in a protracted enquiry into the timber and pulp contracts entered into by the former Conservative Minister of Lands and Forests, the Hon. G. H. Ferguson.⁶⁹ This enquiry uncovered many shady and irregular deals but did not succeed in bringing home the responsibility for them. A useful by-product of the enquiry was a change in the administration of the Lands and Forests Department. In 1921 Albert Grigg retired from the position of Deputy Minister and was replaced by a more qualified man, Walter C. Cain, who had joined the Department in 1903 and afterwards risen steadily to the rank of Assistant to the Deputy Minister. Cain was in the prime of life, aged 44, a native of Newmarket, a graduate of Toronto University and Ottawa Normal School, and a former separate school principal at Lindsay. He was keenly interested in young people and history and his main hobby was horse-racing. However, he belonged to the older type of civil servant; as J. A. Brodie recalls him, he was personally upright and honest but a hard taskmaster, and a strong administrative centralizer who "judged his Department's state of health by the state of its accounts."

After emerging unscathed from the Drury enquiry, Ferguson went on to succeed his critic as Premier after the Conservative victory in the election of 1923. In 1926 he again briefly held the Lands and Forests portfolio. Despite his friendship with Drury, Zavitz admired Ferguson as a candid, forthright chief who was always ready to help on the forestry work by cutting hampering red-tape where necessary.⁷⁰ The Hon. William Finlayson, who followed Ferguson as Minister from 1926 to 1934, had a step-brother who was a prominent forester; and the Minister too took a keen interest in the Branch's welfare as being good politics.⁷¹ Thus, for over a decade, forestry enjoyed a favourable political climate. This period, in fact, saw the full blossoming and dramatic rise of the Forestry Branch. From humble beginnings with a single man in one office, it grew into a province-wide organization with considerable



DR. FERNOW *with class in the Tree Nursery in Norfolk County, 1912*

autonomy and, after 1926, its own Deputy Minister. It launched new and more ambitious programmes and developed new equipment and techniques.

In reforestation, which was still largely confined to southern Ontario, the big step forward was taken in expanding the provincial nursery project. The year 1922 saw the establishment under the Drury régime of two new nurseries at Orono and Midhurst, charged with providing more trees for forest regeneration. In 1924 the Angus seed plant was founded, to supply the nurseries with the large quantities of seeds that they needed. In a few years, they were providing over ten million trees annually for departmental planting of Crown and private lands and in county forests, demonstration plantations and woodlots. The county forests programme, first authorized by the Counties Reforestation Act of 1911, allowed the Province and any of its counties to cooperate in establishing major forests of ten thousand acres or more each.⁷² On private lands the Department's policy was to supply up to three thousand five hundred trees per year free to each applicant. Smaller demonstration plantations and woodlots, located on private and municipal lands, were also encouraged to plant trees as an example to others. These plantations later assumed an importance unrelated to their value in the work of land reclamation. For as they grew, many southern Ontario taxpayers came to appreciate the need for forestry

practices and supported the introduction of forestry measures and better forest protection in northern Ontario.

Throughout the decade the Branch continued to plant trees on its older sites in Norfolk and Prince Edward Counties. In addition, at the suggestion of district forester Frank MacDougall, an important new site was opened up near Sault Ste. Marie. Six hundred and thirty square miles of lands, comprising eighteen townships but named after one of them, Kirkwood, were gradually reclaimed from the virtual desert and poorish farm-land into which they had relapsed after logging and firing had depleted their original stands of white pine. A trained forester and technical staff were sent down to plan the development of the area as a whole. After a planting slow-down during the 'thirties the area was, in 1943, constituted "The Kirkwood Management Unit" and became an important centre for research and experiment.⁷³

The professional forester played a dominating role in this reforestation programme. Foresters directed all the nurseries and the seed plant, supervised all major Crown Lands plantings and periodically inspected every provincial plantation of over 500 trees. The administration was centred in Toronto, where Zavitz directed policy and A. H. Richardson handled the routine business.

While this was going on, another group of foresters were carrying forward the surveys programme that had been planned largely by Dr. J. H. White.⁷⁴ Every summer for twelve years, from 1919-1930, parties (usually of six persons) led by graduate foresters but largely staffed by students, explored the bush gathering materials for the first coherent province-wide study of forest resources. Every winter the permanent forestry staff digested the preceding summer's work. The specific aim of these surveys was to classify the Province's forests by age and type. They gathered information about the different species of trees found in each area and estimated the timber volume thereof. Then they prepared maps showing the physical features and prevailing species in each area. There were two stages in the development of their work. In the first, aerial observers made free hand sketches showing the boundaries of the various types of timber: from these, ground parties were able to estimate the quantities of timber involved. In the later stage, sketching was made more effective by aerial surveying, in which special cameras and photographic techniques were used for taking 'oblique', and later

'vertical', shots of the terrain. From these photographs, in turn sketches were drawn and subsequently aerial maps prepared. The survey work began in the Ottawa-Huron area in 1919, where it occupied three summers. The first survey work in the north was carried out in 1920, when the proposed Longlac pulpwood limit was cruised for the Department. Two years later, the foresters conducted the pioneering James Bay survey; and from then on a regular pattern of surveying was followed, until by 1930 the Department was able to publish *The Forest Resources of Ontario*, a fairly comprehensive summary based on twelve years of survey experience. The volume was not very detailed, but had a fair statistical validity over a wide area. For the first time the Province's timber resources as a whole could be seen in an authoritative perspective.

Responsibility for the survey work originally rested with Dr. White, who had planned the enterprise; but after a few years it passed to two men J. F. Sharpe and J. A. Brodie. Since only these two were involved continuously in the programme as a whole, and even the districts had no direct responsibility for it, Sharpe and Brodie acquired an unrivalled knowledge of the Province's timber resources. They became the principal experts in this vital field of information.

During this decade of reforestation and surveys, the Branch devoted its greatest effort to building up the Fire Protection Service (see Chapter II). The district structure of this service, established in 1921, grew steadily as the various areas of the Province's forest were surveyed and leased for pulpwood. By now this organization, which included the majority of the Branch's foresters, was employed almost solely on protection work.⁷⁵ It formed the largest section of the Forestry Branch and was administratively coordinated with the Reforestation and Survey Sections through Assistant Provincial Forester C. R. Mills, who reported directly to Zavitz.

Beyond these three main sections a certain amount of research work had been started, under the title "Investigation." The first projects were in forest pathology. Soon after the War Dr. J. H. Faull, head of the Botany department at Toronto University, spent several summers in the Temagami area working on tree rot. Later, during the 'twenties' Professor T. W. Dwight, then teaching forestry at the University, worked for the Branch on studies of young white pine stands.⁷⁶ In a more technical direction, R. N. Johnston conducted

practical research in radio, photography, pumps and aircraft, helping to improve and create equipment suited to Ontario conditions.⁷⁷ J. A. Brodie also carried out work on mensuration and cordage standards.

By the close of the 'twenties', therefore, the Forestry Branch had emerged from its formative stage and had become a recognized part of "the establishment". It employed a staff of over thirty foresters, and was responsible for three main functions: reforestation, fire-protection and surveys. Of these, fire protection was the most indispensable, although reforestation seemed to be dearest to the heart of Provincial Forester Zavitz and, as has been mentioned, probably had much to do with promoting a favourable attitude towards forestry on the part of the public of southern Ontario. Throughout these years, he had continued to remain on terms of friendship with his successive Ministers and Premiers. Many were the personal favours he performed for them, the fishing trips he organized for members of the Legislative Assembly and their acquaintances. Many were the conferences in which he participated, in Ottawa, the United States, across Canada and abroad. He was fast becoming a symbol of Ontario's striking progress in forestry. Then in 1926 Premier Ferguson, near the end of his premiership, took a step which marked the 'coming of age' of forestry in the Province. He appointed Zavitz to the new post of Deputy Minister of Forestry, giving him co-equal status with Deputy Minister Cain.⁷⁸

'Expansion' continued to be the keynote of the following two years, which saw several new and significant pieces of forestry legislation placed on the Statute book at the initiative of the Hon. William Finlayson. The first of these was the Forestry Act of 1927, which gave the Minister power to expropriate land required for forestry purposes.⁷⁹ The principle implied in this Act, that of segregating forest land from farm land, was soon reinforced by another, the Provincial Forests Act of 1929, an extension of the earlier forest reserves legislation.⁸⁰ A third measure of the time, the Pulpwood Conservation Act of 1929, required all pulp companies to supply government with complete information about their holdings and to plan their future management on a "sustained yield" basis.⁸¹

None of these measures, which embodied the basic principles of modern timber management, amounted to very much in practice; although Sharpe was shortly afterwards named to the post of



An abandoned farm in Norfolk County



Sand-dunes covering an old farm fence in Norfolk County



Red pine plantation made 1913 at Provincial Forest Station, Norfolk County. This land, once abandoned for farming, now produces over one cord of wood per acre each year

Forester in Charge of Provincial Forests. Surviving members of the Department are inclined to write off the Acts as "window-dressing", intended more for political showmanship than for actual administration.⁸² Nevertheless one of the three, the Forestry Act of 1927, produced concrete results in the setting up of a five man Forestry Board consisting of Zavitz, Dr. C. D. Howe, B. F. Avery (Forester for the Abitibi Power & Paper Company) and J. A. Gillies, a lumberman. This Board was to advise the Government on the Province's research needs; but it soon raised its voice on other issues, such as the question of pay for foresters in the government service. During 1927 and 1928 it made several sweeping recommendations for tree-planting in the north, administration of the Province's lands by the Forestry Branch, and so on. Undoubtedly, it went too far too fast and with the onset of the Trade Depression, it simply faded from view, meeting only twice after 1929.⁸³

The Board's main area of success was in research. It commissioned Dr. J. H. White to study the state of forest research in Canada; and this seems to have been partly instrumental in persuading the Government to inaugurate a further study of forest regeneration on cut-over areas. The programme, in which Professors T. W. Dwight and R. C. Hosie of the staff of the Faculty of Forestry, took part, was one of the few extensions of government activity in forestry which continued to develop during the 1930's.

From 1929 onwards the economic depression was the ruling factor in Canada and the Forestry Branch soon became one of its most obvious victims. The rapid growth of thirty years was now to be severely tested; the forest programmes were to falter or stagnate. The professional forester was to discover that his work had developed largely in a vacuum, isolated from the main stream of the Lands and Forests Department's traditions. Prejudice existed between the professionally trained forester and the old-time civil servant accustomed to patronage appointments and seniority promotions. In 1934 these latent tendencies came to the surface and played their part in a severe ordeal which tested the survival capacity of forestry in the Ontario public service.

PROTECTING THE FOREST FROM FIRE AND DISEASE



Forest protection is concerned with the prevention and control of all factors which cause damage to the forest. In the main these consist of fire, disease, insects, other forms of animal life (such as mites, mammals and birds) and unfavourable atmospheric conditions. In recent years all living organisms that cause damage have become known collectively as “pests”*. A forest pest, therefore, is any

*The term “forest pests” is relatively new in Canadian forestry. It was first used in the United States when, on June 25, 1947, Congress passed a “Forest Pest Control Act” to be administered by the U.S. Department of Agriculture. This was immediately followed by the establishment of a “Forest Pest Control Division” of the Forest Service of the Department of Agriculture. In 1955 the State of Minnesota passed a Bill defining a forest pest as “any vertebrate or invertebrate animal or plant pathogen which is determined by the state entomologist to be harmful, injurious or destructive to forests or timbers.” The use of the term gradually spread into Ontario; it has been used by the Department of Lands and Forests since 1958.

living organism, other than man, which interferes with man's use of the forest and its timber.

Although fire control and pest control are the two major fields of forest protection, they are only slightly related to each other, being based on different principles. There are, however, two important areas where they interact in practice. First, fire-killed timber can lead to outbreaks of bark beetle infestation which, in turn, can cause harm by attacking healthy trees. Second, epidemics such as the spruce budworm have served to provide an extensive "fuel base" for the spread of many of our most catastrophic forest fires.

Traditionally, fire has received the main attention from the public, because it is both spectacular and dangerous to life and property. The losses it causes are relatively well-defined and easy to calculate. Insects, disease and wildlife, on the other hand, usually cause unspectacular damage and the losses are harder to estimate. All insects and diseases in their natural surroundings are part of the overall balance of nature, and are interdependent, with each playing a specific role. The question then arises, when is a living organism a pest and when is it beneficial? Organisms (especially those with inherently high reproductive rates) become pests when their environment becomes unusually favourable. This may result from an overabundance of preferred food, a period of optimum climate, or a sudden release from natural enemies, such as often happens when an organism is transported to a different country.

Historically, fire protection developed in Ontario before the need for pest control was recognized. For this reason, this chapter will treat firstly of the growth of fire protection (in which this Province was a pioneer) from 1878 to the present day; and secondly of the growth of pest control from the last years of the nineteenth century.

* * * * *

Ideal conditions for a major forest fire arise when a prolonged period of two or more weeks, drought is followed by a combination of 80° temperature, 30% or less relative humidity and winds 30 miles an hour or more, blowing usually from the southwest. When these conditions occur in a dried-out forest area, it needs but a spark to set off one of the most terrifying spectacles of destruction imaginable. The extent of the holocaust, in the absence of effective control, is limited only by the presence of natural barriers such as large bodies

of water, a scarcity of fuel or a sudden change in the weather. Many lurid descriptions are extant of forest fires at the height of their fury. This one, by the well-known geographer Dr. Robert Bell, gives a vivid picture of a conflagration in a dense northern forest of black and white spruce, banksian pine, tamarack and balsam fir, sometime in the 1890's.

When the fire has got under way the pitchy trees burn with almost explosive rapidity. The flames rush through their branches and high above their tops with a terrifying sound. The ascending heat soon develops a strong breeze, if a wind does not happen to be blowing already. Before this gale the fire sweeps on with a roaring noise as fast as a horse can gallop. The irresistible front of flame devours the forest before it as rapidly as a prairie fire licks up the dry grass. The line of the gigantic conflagration has a height of 100 feet or more above the tree tops, or 200 feet from the ground. Great sheets of flame disconnect themselves from the fiery avalanche and leap upwards as towering tongues of fire, or dart forward bridging over wide spaces, such as lakes and rivers, and starting the fire afresh in advance of the main column . . . The immense shooting flames are probably due to the large quantities of highly inflammable gas evolved by the heat from the pitchy tree tops just in advance of actual combustion, and they help to account for the incredible speed of most of the larger forest fires . . . The wild animals appear to understand the significance of the roaring noise and the clouds of smoke in the sky in advance of these conflagrations. The terrified deer, bears, wolves, foxes, lynxes and hares flee for their lives, followed by multitudes of the smaller fur-bearing animals; but as a rule all are soon overtaken and destroyed. Should any of the larger beasts be fortunate enough to reach a lake or river in time, they may escape along with the beavers, muskrats, otters and minks, which seldom stray far from the water. The birds fly up into the air in confusion in advance of the wall of fire, and appear to become stifled by the heat and smoke; and after fluttering about for a few minutes they fall into the flames and perish.¹

Such scenes of destruction, started by natural or human causes and aided by the presence of man-made timber-slash and other debris, were common enough throughout the nineteenth century, and can recur even today if the conditions are favourable.² They caused wholesale destruction of large quantities of mature timber, and repeated burnings of healthy young forests – thereby reducing vast areas of forest to a desert condition, particularly wherever thin soils

overlying rock were completely burned or laid open to erosion by wind or flood.

Typical of these disasters was the first known major fire to strike the Ottawa Valley in 1851, which commenced at the mouth of the Bonnechère River and devastated what was locally known as 'the Big Pine country'. The cause of it was a piece of burning paper from a musket fired by a river driver. In 1855, an Indian burning off a blueberry patch on the shores of Lady Evelyn Lake, west of Lake Temiskaming, started a conflagration that spread right along the Montreal River and two hundred miles west to Michipicoten. More than a dozen years later, surveyors travelling this region describe in their reports "two thousand square miles of desolate wilderness . . . formerly covered with pine" of which the remains could be seen "in the shape of huge trunks blackened and charred by fire."³ Next in 1864 two huge fires, one originating on the Thessalon River and the other from the western arm of Lake Nipissing, met at the Wana-pitei and ravaged the entire south slopes of the Killarney Mountains, from Whitefish to Collins Inlet. Only seven years later much the same area was again devastated by fire, resulting from the carelessness of C.P.R. surveyors working along the north shore of Lake Superior. Six members of one survey party perished in the flames.

As the century progressed, the tremendous destruction of forest wealth caused by these great fires was aggravated by the increasing loss of human life, as the fires more and more affected settled townships in forest areas. Thus in 1894 a fire which originated in Northern Minnesota, where it had already taken 140 lives, spread across the Rainy River and burned several newly settled townships in Ontario, bringing death to a family of six. Sixteen years later another fire in the same district took 42 lives; and in the following year, 1911, the disastrous Porcupine and Cobalt conflagrations killed no fewer than 73 persons.⁴

During this time, the rather primitive fire control system based on the Act of 1878⁵ and on Aubrey White's practical scheme for implementing it in 1885, had been steadily evolving. In 1878 the first two fire districts were proclaimed (mainly in areas open for settlement) and in 1885 the first fire rangers, thirty seven in number, were sent out to their duties (from May 1st to October 1st) on Crown Lands under licence. The fire rangers' duties were simple. They and their assistants were to travel through the districts assigned to them,



Digging the fire line

keeping a record (diary) of all their activities. They went in pairs, by canoe, following regular “beats” along main waterways and across portages, which they kept in repair. Wherever they went, they posted copies of the Fire Act in conspicuous places and distributed them to settlers, railwaymen and others concerned, making sure that they fully understood and obeyed the Act. In the course of their journeys, they had to locate suitable positions – such as rising ground topped by a tall tree – that could serve as fire look-outs. Also, they had to extinguish any fires they might come across, if necessary engaging and hiring outside assistance for the purpose. At any time they were open to visits from travelling inspectors sent out from district headquarters. Finally, at the end of each season, they had to turn in reports, both specific and general, with their accounts, to district headquarters.⁶

The cost (seven thousand dollars) of the plan was shared equally between the Department and the timber licensees, who still had the option of deciding whether or not to participate in the plan. The licensees, however, were well pleased with the first year’s working. They reported to the Department that many fires had been suppressed that might otherwise have reached serious proportions, and that various persons who had violated the provisions of the Act had

been brought to justice and fined fifty dollars. They therefore recommended that the Department continue the plan and extend its operation. Next year, accordingly, a third fire district was proclaimed, extending to the western boundary of the Province. Upon instruction, the fire rangers now began to keep watch over Crown Lands adjacent to their districts, especially in recently sold territory. This enabled them to check many fires at their source, before they could spread. Most fires, they observed, were caused by settlers (clearing land), river drivers (lighting fires on land for cooking) and careless hunters, fishermen, tourists and explorers (misusing matches, smoking material and gun-wadding). At the close of the 1887 season the timber licensees requested that, in the interests of fairness, fire ranging should be made compulsory on all limits.⁷ But this step was not taken for another thirteen years.

By 1896 the number of fire fighters had grown from thirty seven to one hundred and sixty;⁸ but so had the number of fires! Three serious outbreaks on Crown Lands that year led to the appointment of a Royal Commission "to investigate ways of bringing about better preservation of the forests from destruction by fire." As a result of its recommendations, the Fire Act of 1878 was amended in 1900⁹, to provide for the appointment of fire rangers on Crown Lands not under timber licence and on licensed areas, whether requested by the licensees or not; costs in all cases were to be shared between the Department and the licensee. Thus at last the employment of fire rangers became generally compulsory; at the same time they were given power to requisition help from the general public in putting out forest fires.

Ten years later, the effect of this amendment was to some extent weakened when, in 1910, the government decided to make timber licensees pay for the full cost (other than publicity) of fire protection on their limits. Naturally, this led to some neglect of areas where the timber was not under licence;¹⁰ and the defect was not fully remedied until 1917.

Timber licensees, of course, were not the only parties on whom responsibility for fire prevention had to be laid. In the early days, settlers had been frequently blamed by lumbermen for being a major cause of setting off fires; but as time passed, they figured more often in the role of victim, than in that of agent. In 1901, for the first time, settlers who suffered losses from forest fires were given assistance.¹¹

After forty four thousand acres had been burned in the Temiskaming area, the government gave sums of up to two thousand eight hundred dollars to repair damage, purchase seed, and build a new school in Kerns Township.¹² Henceforth, it was recognized that a great fire might be a public disaster, requiring the provision of help to the sufferers out of the public purse. Another possible source of fire trouble, especially in the north country, was Indians. To put a check on carelessness and ignorance in this quarter, the Department asked the Hudson's Bay Company to print fire proclamations in the Indian languages and post them along canoe routes throughout their territory.*¹³ About the same time, with the beginning of forestry practices around 1901, came the first glimmer of recognition that fire was not necessarily always an evil in the forest. We find the first reference to fire as a "servant" for burning refuse after logging, and as a means of contributing to more effective regeneration of a certain desired species of trees.

However, the agency that at this time carried the heaviest responsibility for taking precautions against fire was the railways. In 1903 the area most exposed to fire hazards was believed to be that traversed by the Temiskaming and Northern Ontario Railway, then under construction. The Department entered into an agreement with the Company whereby all its employees, contractors, sub-contractors, etc. were bound to assist in suppressing any fire that might break out on its right of way. The Company agreed to pay half of the costs involved, including the cost of suppressing fires. By 1905, out of four hundred and twenty five fire rangers employed by the Department, no fewer than fifty nine were being employed along the Temiskaming and Northern Ontario Railway.¹⁴ As a result of this cooperation, no serious fires were reported.

Subsequently, the Fire Act was amended in 1906 to give the Department power to appoint fire rangers on railways generally, and to charge the companies with the full cost. The justification for this step became clear in October, 1910, when railway locomotives and settlers were jointly blamed for causing an uncontrollable outbreak of fires along the U.S.-Ontario boundary in the Beaudette-Rainy

*Not until 1961 was the perennial problem solved of how the cost of fighting fires on Indian Reserves, which constituted over eight hundred and seventy thousand acres of Federal Lands in Ontario, should be shared between the federal and provincial authorities. Since then the Department of Indian Affairs has paid the Ontario Government two cents per acre to take care of forest fire suppression on all Indian lands within the Province's fire districts.

River area. This conflagration burned over three hundred thousand acres and cost forty two lives, all on the American side of the border.¹⁵ By this time some five thousand miles of railway line were passing through the various fire districts of Ontario; and it was becoming urgent that steps should be taken to reduce the fire hazards, both during and after their construction. Most railways came under the jurisdiction of the Board of Railway Commissioners for Canada, acting under the authority of the Dominion Railway Act. In 1907 this Board issued its first order prohibiting the use of lignite fuel in locomotives, and requiring the companies to equip all locomotives with standard forest fire protection gear and to construct fire guards along the right of way.

In 1912 E. J. Zavitz, the new Director of Forestry in the Department of Lands and Forests, assumed responsibility for supervising fire protection on the railways of the Province, for which purpose he was named an inspector under the Board.¹⁶ He soon established a system of inspection, under Clyde Leavitt,¹⁷ under which regular fire patrols were provided and various preventive measures – such as stationing watertank cars with pumping equipment at strategic points across the Province – put into force. As time passed, these measures bore fruit in a steady reduction of railway fires to a point where, with the introduction of diesel fuel-burning locomotives and the necessary protective equipment, they ceased to be a major problem. It only remained to work out a fair agreement between the Department and the companies on sharing costs. This proved a tricky business, and it was not solved until 1957.

Meanwhile, unfortunately, the general incidence of forest fires over the Province as a whole was getting worse rather than better. The apparatus of prevention and control through fire rangers had proved successful enough in reducing the number of small fires: but it was incapable of controlling the rarer, but larger and more destructive outbreaks. On July 11th, 1911 the great Porcupine conflagration broke out, as a result of the joining up of a number of separate fires fanned by a strong gale. According to the Department, these fires originated in the vast quantity of slash that carpeted the ground for miles around the newly cleared gold mining centres of the area. The trees, mainly jack pine and spruce, contained resin and were highly inflammable; the drought conditions had dried them up, with the result that they ignited suddenly and fiercely. Several days of high

winds produced a holocaust that swept, completely out of control, through the towns of Timmins and South Porcupine, and then turned northwest to destroy Porquis Junction and Cochrane. Altogether, it devastated an area of nearly half a million acres, and took the lives of 73 persons.

The Porcupine fire produced some further improvements in control. An Act of 1913 stiffened the penalties against fire offenders, and extended the appointment of fire rangers.¹⁸ For the first time, in 1914, a systematic record of fire outbreaks was instituted. This showed that two thousand two hundred and ninety six fires occurred in that year, of which sixty nine per cent were ascribed to railway causes.¹⁹ By the following year, the total number of fire rangers had grown to nine hundred, of whom five hundred and forty two were employed on railways, forest reserves and Crown Lands not under licence, while three hundred and fifty eight were employed on Crown Lands under timber licence.²⁰

All this was not enough. One of the greatest difficulties of fire fighting was the variation, from year to year, of the climatic conditions that favoured outbreaks. A series of wet summers, with a low incidence of fires, might insensibly relax the zeal of seasonal fire-ranging. It must be remembered that, as Zavitz has pointed out, "up to 1916 there was no permanent fire protection service. The problem was taken care of by two clerks in the Woods and Forests Branch. The details in the north were taken care of by the Crown Timber agents, whose staffs changed over to timber work in the autumn under the Woods and Forests Branch. The licensees, or limit holders, placed their rangers or agents as fire rangers, the Department having inspectors who carried out supervision."²¹

At the end of July, 1916, a month of intense heat and drought culminated in the great Matheson conflagration, described as "the most terrible and deplorable fire in the history of the Province." A great number of small fires, fanned by a violent wind, united in "one seething cauldron of flame" that swept along the Temiskaming and Northern Ontario Railway to the Abitibi River. It burned clean an area equal to twenty townships or some thirteen hundred and twenty nine square miles, and during its course destroyed seven towns and villages, including razing the town of Matheson with a loss of two hundred and twenty four lives and property damage worth two and one half million dollars, apart from the destroyed timber. During



Matheson School after the fire



Town of Matheson after the fire

the same conflagration part of Cochrane was also destroyed.²²

Scores of survivors' tales are still current today to highlight the horrors of the Matheson fire. A number of these were collected by Rudy Platiel and published in the Toronto *Globe and Mail* on July 27th, 1966, the fiftieth anniversary of the disaster. Platiel tells how at the town of Nushka the Rev. William Gagne led thirty five of his parishioners to hoped-for safety in a clay ditch near the railway tracks. He then returned to the town, where with twenty eight others he was burned to death; meanwhile, the thirty five in the ditch also died of suffocation. Nushka was afterwards renamed Val Gagne in memory of the priest.

At Matheson many fugitives escaped the conflagration by boarding a passing freight train. As it roared through the blaze, two cars ignited and had to be dropped off after their occupants had been transferred to other cars. Meanwhile other Matheson residents found safety by plunging into the waters of the nearby Black River. Outside, in the bush, numerous settlers ran down to the nearest rail tracks hoping to catch a passing train; but none came and their charred corpses were afterwards found beside the lines. One settler, Percy Alderson, ran from Matheson to his home in the bush to save his wife. They had barely time to carry out a few belongings when the flames engulfed their house. After a night of terror spent lying in the open, Alderson himself became blind from the red-hot cinders that showered them. However, he contrived to crawl to a well to soak their clothes, while his wife caught a stray horse, mounted it and led her husband to safety through the scorched bush.

Two travellers stopped at a settler's house where all was silent. In the cellar they found the bodies of twenty two persons who had been suffocated there. At another spot Mrs. John McCullum, her seven children and a neighbour were at home when the fire ignited a haystack and the wind blew the flames on to their roof. The whole group scrambled down a well for safety and watched in horror as the fire began creeping down the wooden cribbing of the well. But Mrs. McCullum saved them by tearing off her clothing, soaking it and using it to beat back the flames.

In 1966 the Minister of Lands and Forests, Hon. Kelso Roberts, unveiled a cairn at Matheson, to commemorate the most lethal fire in Ontario history.

The 1916 fires focussed public attention on the shortcomings of

the fire protection system, and provoked a demand for its overhaul. The Minister, Hon. G. H. Ferguson, promptly called in Zavitz and instructed him to reorganize the whole service. It was obvious that, with the recent great expansion of the lumbering and pulp and paper industries, forest protection could no longer be left to the Woods and Forests Branch, but must become a separate branch closely associated with the forestry work. Accordingly, the Legislature passed the important Forest Fires and Prevention Act of 1917, which provided for the appointment of a Provincial Forester to administer and enforce the Act, with the aid of a substantial paid staff.²³ Zavitz was promoted to fill the post and given charge of all matters pertaining to forest fire prevention, reforestation and tree diseases. With this change of administrative control was born the organization that was to be known for many years as the Ontario Forestry Branch.

The new Act provided that the Provincial Forester was to appoint fire rangers in all areas, to be paid for by a tax of one cent per acre levied upon all timber licensees. He was to set a close season from April 15th to September 30th each year, during which no one might start a fire of any kind, even for cooking or warmth, without obtaining a written permit. The Provincial Forester could also enforce removal of fire hazards from private as well as public lands; regulate forest travel during dangerous periods; prescribe safety precautions in the use of engines; and dispose of mill refuse and other hazardous industrial wastage.

For the first time the Province now had a Fire Protection Act "with teeth in it"; and, more important, professional foresters were to be brought into the service of the Department, to carry it into effect. Zavitz's first act was to appoint as his chief assistant Professor J. H. White, of the Faculty of Forestry in the University of Toronto. White devoted part of his time to planning the service and building up an efficient organization. He divided the whole area under protection into districts, each with a Chief Ranger in charge assisted by one or more Deputy Chiefs. Within two years there were thirty such districts, staffed by a peak force of one general superintendent, four inspectors (none of whom were professional foresters), thirty chief rangers, forty-nine deputy chief rangers and one thousand and fourteen fire rangers. The four inspectorates were the western (including Rainy River, Kenora and Thunder Bay), northern (including Temiskaming, but not Temagami, and the Clay

Belt), central (comprising Algoma, Sudbury, Eastern Temagami and Northern Nipissing) and southern, embracing all the area south of the French and Mattawa Rivers. Until 1934, two inspectors were employed to enforce the use of protective appliances on railway locomotives.

The most important practical reforms in the procedure of fire fighting were the erection at suitable spots of wooden lookout towers (the first sixty two during 1917), the repair of two thousand miles of trail, and the purchase of fire fighting equipment, such as portable fire-pumps and light pick-up trucks. At last it was recognized that, for fighting fires, manpower alone was not enough and that the help of machinery must also be enlisted. This trend was further emphasized in 1922, when the final report of the Timber Commission of 1920 recommended extension of the tower system, experiments with the use of aircraft and year-round employment of timber scalers as fire rangers.²⁴ Two years later, the first batch of steel lookout towers were purchased and aircraft began to be used specifically for fire prevention and suppression.²⁵

The towers were manned by casual employees, the picturesque nature of whose work has been well described by Henry Russell, a timber technician at Kapuskasing, who at one time spent five seasons as a towerman. Most towermen were trappers by profession, and were, therefore, accustomed to a life of isolation. From April to September or later, they lived in tiny wooden cabins near their towers, climbing up early every morning to the top and staying there all day until six p.m. or later if the fire hazard was great. From their "eyries" they constantly scanned the forest spread out around them for the tell-tale plume of smoke that would indicate an outbreak of fire. The towers were linked together by telephone and later by radio, which enabled help to be summoned from the nearest fire control station, if a fire occurred. The watcher's work was monotonous and exacting, requiring freedom from fear of heights (most towers swayed in high winds), keen eyesight, intelligence and enough job contentment to repel loneliness. A few towermen brought their families along with them; but most were bachelors who kept boredom at bay by such devices as reading, sketching, gardening or prospecting: in Russell's case he studied slide rule.* Wildlife pro-

*Towermen could also develop a forest philosophy, e.g. Tom Parris, who for years minded a fire tower near the northern end of Oxtongue Lake, Algonquin Park. A memorial plaque unveiled in 1966 pays tribute to Parris as "riverman, woodsman, natural philosopher and friend of the people of Oxtongue Lake", adding that "for forty years from this place he protected the forest and its creatures."



vided the main diversion, and occasionally brought danger from a rutting moose, or a hungry bear. At the end of each season the towerman was happy to return to headquarters, turn in his report, and pick up an average of five hundred dollars for his season's pay.²⁶

The new fire fighting machinery created more jobs for the unskilled or semi-skilled seasonal worker. But, at the other end of the scale, it also emphasized the importance of employing more highly professionally trained men in administration. From the end of World War I, the Forestry Branch began to recruit forestry graduates from the University for its service. The Provincial Forester himself stressed the point that, since fire control was a highly specialized line of work, further progress could not be made until at least a skeleton staff of ranger personnel was employed on a permanent basis. He repeated this recommendation every year, until it met with success in 1926. From this time on, the forest protection staff comprised a core of permanent employees, some of whom were graduate foresters, and a part-time force of casual employees engaged during the fire season.

It must not be supposed that the employment of more, and more efficient, fire rangers was everywhere welcomed with open arms. On the contrary, there were areas where fire controls were resented, and demands for their withdrawal made – with tragic results. The most unhappy example of this was associated with the outbreak of the great Haileybury fire of October 4th, 1922. As a result of local pressure, all fire rangers and fire permit regulations had been withdrawn from the area, which embraced large mining and settlers' land clearing activities. Even when the fire situation became alarming during the hot dry weather of September, the local authorities still objected to the return of the rangers to duty. Suddenly on October 4th, a number of settlers' fires, whipped together by a violent wind, turned into a raging holocaust that swept through numerous towns and villages (including Charleton, Haileybury and North Cobalt), burned over an area equivalent to eighteen townships, destroyed six thousand homes and took forty lives. This fire was noted for its terrific rate of spread: it all occurred in the space of a single day, which was followed, on October 5th, by a snowstorm! The drought conditions of 1922 continued through 1923, resulting in the burning of over two million acres of timber lands, the highest figure for any year on record.²⁷

In spite of the Haileybury disaster, the decade that followed the

passing of the Act of 1917 was a period of steady progress in the work of forest protection. In 1922 the Ottawa-Huron region south of the French River was divided into three districts each under a professional district forester assisted by a chief fire ranger. This change heralded the start of an improved field system which speedily covered the forested area of the Province with a pattern of inspectorates, later (1933) renamed districts. In 1923 the first permit regulations were extended to cover the same areas; and in the following year a new fire act was passed which extended to April 1st the close season for setting out fires and widened the range of penalties for infractions of the law, to include imprisonment.²⁸

Now at last the Department could claim that it had adequate fire protection legislation *and* the means to enforce it. Now the service was truly province-wide, and was employing a permanent staff for the work, grouped into three inspectorates and seven districts. By now, too, the Province's Air Service was well established and integrated with the government services to which it was best adapted. The traditional methods of fighting fire with bucket, mattock, axe and shovel had been up-dated by the addition of mechanical fire pumps, as well as hundreds of hand pumps and miles of hose. Transportation had been modernized by the provision of trucks, rail-cars and velocipedes for fire patrol purposes. Communications had been improved by the laying of fifteen hundred miles of telephone line and the erection of one hundred and thirty five wooden and forty two steel look-out towers. In 1927 wireless telegraphy was first used by departmental personnel in the Red Lake area for conveying forest fire information; this was the forerunner of the province-wide radio system of today. By the close of the 1929 season the first experimental aircraft radio sets were in use; and during the following year the full use of radio as a two-way means of communication between air and ground was realized.

About 1925 meteorological studies were started to determine the effects of relative humidity and other weather factors on the behaviour of forest fires. Three years later the Dominion Meteorological Service began providing special daily weather forecasts throughout the fire season. Gradually both the studies and the service were augmented over the years down to the present time.

Some of the fruits of this progress were demonstrated in 1929, a year with an exceptionally severe fire season – worse than the 1923

season in every respect save area burned. The new techniques enabled fires to be controlled under the most adverse conditions; and this success boosted the morale of the fire-fighting staff and gave them additional knowledge of the weak spots that needed to be dealt with in the future.



Modern steel fire-tower at Myers Cave, Barrie Township, 1955

One such weak spot, however, remained perennially troublesome. As far back as 1921 the Provincial Forester had pointed out in his annual report that the "crux of the problem" of fire-control lay in the annual accumulation of slash produced by existing logging methods. "Until brush disposal is systematically undertaken", he declared, "as an integral part of the operation of logging, our forests will burn". Zavitz was substantially correct in saying this; but the experience of the years that followed and the fact that pulpwood operations have become continuous throughout the fire season, have produced a new situation. Today the Branch finds that it has to live with whatever slash is left by the logging and pulpwood companies, and has to devise its own methods of dealing with all fires that may occur anywhere in the Province, regardless of the conditions that cause them. At the present time, therefore, in spite of all precautions, large areas of slash left in the pulpwood and logging areas continue to constitute a serious forest fire menace. Only in one part of the field, that of Provincial Parks, is there an exception to this. In 1921 the Provincial Parks Act gave the Minister of Lands and Forests power to insert in timber licences granted in parks a proviso making brush disposal compulsory.²⁹

In 1930 the Forest Fires Prevention Act of 1917 was completely revised.³⁰ The close season for fires was extended to October 15th, instead of September 30th. Organized townships were made responsible for extinguishing all fires within their boundaries. Persons carrying on any operation (other than land clearing) which was liable to cause a fire hazard within a fire district, were required to take out a work permit. The Minister was authorized to close to travel any area where the fire conditions warranted such action. In the next year twenty seven thousand permits to burn were issued, covering nearly eighty two thousand acres.³¹

About this time the effects of trade depression began to be felt severely throughout the Province. One aspect of this was the emergence into temporary prominence of a usually rare cause of forest fires – incendiarism. There was for some years an appreciable increase of arson for the purpose of creating employment for more fire fighters. This reached a peak in 1936, when two hundred and seventy two fires were reported as arising from this cause. However, in the following year lightning was the major cause of outbreak; it was responsible for one third of the total of fires (seven hundred



After the fire. A burned-out area

and fifty five) reported for 1937, as compared with the normal rate of roughly fifteen per cent.³²

As the 'thirties progressed without any sign of a lift in the depression, the Forest Protection Service found itself increasingly hamstrung by budgetary stringency, reflecting the decline in public revenue. During 1932 a reduction of staff took place, affecting two fire inspectors, one chief ranger, twelve deputy chief rangers and one hundred and sixty four rangers. This was followed in 1934 by a change of government, when the Hepburn administration took office, formally pledged to reduce government expenditure. The Forestry Branch, being one of the heavier spenders in the Department, at once became a main target for economy. The Deputy Minister of Forestry, E. J. Zavitz, gave up his position and reverted to the rank of Provincial Forester; his place as Deputy was taken over by Frederick Noad who, however, resigned ten months later. During Noad's short term of office more changes in personnel took

place, including the dismissal of some twenty key forestry personnel. Soon afterwards the Air Service was reorganized, and its Director, W. R. Maxwell, superseded.³³ The effect of these economies on the Forest Protection Service can be estimated by quoting an extract from the Annual Report for 1936:

1935 Forest Fire Protection

Equipment	The only major equipment purchased of importance were six new-type pumps. The balance of the purchases were for replacement.
Hazard Disposal	No major projects were undertaken in this connection. ³⁴

By 1936 the effect of this ultra-cautious policy began to be felt. An exceptionally high fire-hazard in the summer of that year forced the purchase of considerable extra equipment. But in the following year a major fire outbreak occurred at Dance, a settled township in Fort Frances District. October 10th was the fateful day when numerous small settlers' fires, burning in townships which had been withdrawn from the fire districts, were fanned together by gale conditions to spread destruction over a ninety two thousand four hundred acre area.³⁵ Four major fires contributed to the conflagration and twenty people lost their lives. Since that time several fires of great extent have occurred but none have been accompanied by loss of human life.

In 1939 the Legislature appointed a Select Committee to investigate the policy and administration of the Lands and Forests Department. Two years later this Committee presented majority and minority reports, which are fully discussed in Chapter 17.³⁶ The Committee had no serious criticism to make of either the air or the ground services of Forest Protection, but was content to urge the Department to "continue to maintain an adequate system of protection."

In 1941 F. A. MacDougall became Deputy Minister of Lands and Forests and immediately undertook a complete reorganization of the whole Department. At headquarters ten Main Office Divisions were formed, one of which was concerned with Forest Protection. By relinquishing accounting and personnel matters to new divisions created for these purposes, the Forest Protection Division was set free to concentrate on its two prime responsibilities for fire pro-

tection and control of pests and diseases. To bring the field organization into line with the main office reorganization, the district forester thenceforward became fully responsible for all administration within his district. Further details of the 1941 reorganization will be found later in this book, in Chapter 18.

During 1943 steps were taken to put the training of staff for fire control work on a year-round rather than a seasonal basis. A decision was taken to build a permanent forest ranger school near Dorset for such training purposes.

With the end of the second World War came important personnel changes. In 1945 C. R. Mills, formerly Assistant Provincial Forester, returned from war service to take up the post of Chief of the Division of Forest Protection. In 1946 E. J. Zavitz, who had since 1941 been Chief of the Reforestation Division, relinquished his former post of Provincial Forester, which was abolished by the Forest Fire Prevention Act of the same year.³⁷ This Act made provision for the Department to negotiate agreements with municipalities for the prevention and control of fires. Another, more controversial, section of the Act placed upon licensees obtaining permits for summer operations the onus of "proof of innocence" in case of outbreaks of fire. At the same time woods operators were given permission to recommend the appointment of honorary fire wardens to enforce the Act.

Thirteen years later, in 1959, the Act was amended to enable the Department to make fire control agreements not only with municipalities, but also with timber licensees, and owners or tenants of railway lands, as a result of which their liability for fire costs was limited in accordance with the number of men they employed.³⁸

In 1947 the Kennedy Royal Commission made a large number of recommendations affecting forestry in general, but without making specific reference to forest protection.³⁹ Insofar as these recommendations were applicable to the service, they were later carried out in the natural course of development. They included such measures as provision of portable radio equipment for making contact between aircraft and fire crews, extension of access roads in forests to facilitate travel and woods operations, provision of pre-season training in forest fire control, increased use of helicopters and parachutes, provision of boats at ranger stations, adoption of a fire-danger rating system, and so forth.

The fire season of the following year turned out to be one of the worst on record. Two fires starting on May 25th, 1948, in the Missisagi Provincial Forest joined together and burned over six hundred and forty five thousand acres, which represented sixty percent of the total area burned and seventy six percent of the total timber damaged during that year.⁴⁰ While the fire was raging, attempts were made to induce precipitation over the area by seeding clouds from an aircraft with dry ice. These experiments, carried on in cooperation with the federal Department of Transport, the National Research Council and the R.C.A.F., were the first attempts of their kind. While a slight increase of precipitation was noted, definite results were hard to assess because of the lack of ground checks. The fire left three hundred million board feet of timber to rot on the area. Salvage represented an immense task and "large, well-established lumber operators would not forego their own planned operations to assume the risk of producing lumber from fire-damaged timber." Consequently, for the first time, the government had to undertake the project itself, organizing many small operators to take the timber out. Timber valued at more than thirty five million dollars was salvaged and as a by-product an area of a thousand square miles was opened up through the construction of a hundred and thirty nine miles of all-weather roads and four hundred miles of logging roads.⁴¹

Next year saw the taking of an important step forward when the first formal district fire-control plan was tabled. This involved assessing the manpower, equipment and facilities available at all times to meet the fire problem. Although this was not the first fire control plan attempted, it did represent the first attempt to standardize such plans on a province-wide basis.

By arrangement with the Department of Reform Institutions, prison labour became available for the first time in 1954 to fight forest fires. A group of fifty men were employed, in units of ten, under guard. The prisoners were allowed to travel within fifty miles of the prison farm and were paid a wage. The experiment proved successful and has been continued.

Once again in 1955 a very bad fire season occurred, when two thousand two hundred and fifty two fires burned over three hundred and ninety six thousand acres of forest.⁴² This taxed to the limit all of the Department's fire-fighting resources, but the results justified

the new flexibility of their use across the Province. In the following year a new fire district was established in Southern Ontario, covering seven townships in Bruce County. This marked a tendency that is likely to become more common with the development of new large areas of plantations and wood lots in Southern Ontario, requiring the benefits of organized fire protection. In 1963 another new fire district was created in Lanark County in the northwest section of the Kemptville District, an addition which brought the total number of such districts to twenty-one.

To sum up the past eighty years, forest protection in Ontario has passed through three successive stages of growth. In the first (1878-1917) efforts were limited to protecting the revenue-producing timber areas only. In the second (1917-1941) the coverage of the service was gradually widened to affect the whole Province, and its efficiency was revolutionized by the introduction of mechanized methods of fire fighting and the employment of professional foresters in key positions. In the third (1941-1967) the administration was overhauled to coordinate the work of forest protection in the field and at headquarters with the rest of the Department's activities. This not only served to reduce fire-outbreaks to a minimum, prevent repeated burns and pool the use of province-wide resources to ensure fire control over the whole area. It also brought a realization that forest protection, besides protecting the vast lumber and pulpwood resources of the Province, has a vital part to play in promoting soil and water conservation, recreational and health provision, and preservation of fish and wildlife habitat.

In the course of this expansion many official and unofficial agencies and bodies have played an important role. Outstanding among these are the Canadian Forestry Association, the Ontario Forest Industries Association, the National Research Council (through its Associate Committee on Forest Fire Protection), the Forests Committee of the National Fire Protection Association and the North American Forestry Commission.

* * * * *

FOREST PESTS. Before the twentieth century insects did not present an economic problem in forestry, because saw timber was abundant and the pulp and paper industry was not yet established. Therefore periodic outbreaks of pests, such as the spruce budworm, and of epidemics of disease, were of little consequence. Furthermore

a feeling of helplessness prevailed among woodsmen because there were no known methods of controlling defoliators over large acreages. Pioneer entomologists, therefore, such as the Rev. C. J. S. Bethune of Toronto and William Saunders of London, Ontario, concentrated their efforts mainly on the problems of agriculture, particularly the insect pests of fruit trees and field crops. Since the chemical control of insects was in its infancy, they stressed natural or biological methods of control. Insects were classified as "injurious" or "beneficial", and the latter were sub-divided into parasites and several categories of predators. At the close of his evidence to the Ontario Agricultural Commission in 1880, Saunders voiced the prophetic view that "we have to look to the insect world to control that part of the insect world which is destructive to our crops."⁴³ It was also believed generally that birds played an important role in controlling insects, and insectivorous birds considered beneficial to agriculture were protected by an Ontario statute as early as 1864.⁴⁴

In its report of 1881, the Agricultural Commission drew attention to the harm done by "insects injurious to forest trees", especially those belonging to the wood-borer family. In the following year this was taken up by speakers at the American Forestry Congress, who denounced such pests as the forest tent caterpillar, the white pine sawfly and the maple borer. Still, the main remedy they advocated was the use of parasites and predators. The Congress also stressed the damage done to trees by livestock; and in their report on the Congress the Ontario delegates recommended the passage of provincial legislation to prohibit cattle, etc. from running at large in public woodlands.⁴⁵

For some years after the Congress there was a lull in the attention paid to insect pests of forest trees, though in 1896 and subsequent years down to 1899 Dr. William Brodie, the dentist-naturalist from Toronto, revived interest by publishing, in the Annual Report of the Clerk of Forestry, the fruits of his studies on oak galls, the maple borer, the spruce gall-louse, the tussock moth, etc. At the turn of the twentieth century the main-stream of entomological research on this continent flowed in the United States; but by 1909, the Canadian Government had appointed C. G. Hewitt of Britain to the post of Dominion Entomologist. Dr. Hewitt was the first professional entomologist in Canada. In establishing the Entomol-

ogy Branch in 1914, he put forest insect investigations on a strong organizational basis under the leadership of Dr. J. M. Swaine.⁴⁶ Prior to this, in 1909, Hewitt established the first working arrangement between the federal Government and the Ontario Government on forest insect matters, by conducting a careful inspection of all nursery stock coming into Ontario in order to detect the brown-tail moth of Europe.⁴⁷ By 1910 the federal Government passed the Destructive Insect and Pest Act,⁴⁸ clearly establishing federal jurisdiction in preventing the introduction and spread of foreign pests of vegetables. Thus a basic division of function between federal and provincial authorities began to emerge; the federal Government would concentrate on the quarantine aspect of pest control and on research into problems, while the provincial Government, because of its resource management responsibilities, would test and apply control methods as a regular part of forest management.

After the First World War the Department undertook, at its St. Williams nursery on Lake Erie, the first organized attempt in the Province to control a notorious forest insect, the white-pine weevil, by clipping and burning infested shoots of the tree.⁴⁹ This type of mechanical control was successful enough to be extended throughout Southern Ontario. By 1940 the clipping and burning technique had become highly efficient, achieving under a trained St. Williams crew almost complete control of the weevil over some seven hundred acres of plantations.⁵⁰ It is still favoured today under certain circumstances.

The second major step in insect control came in 1928 when the Department, in cooperation with federal entomologists, began experimenting with an aircraft lent by the Department of National Defense, to control a hemlock looper outbreak in Muskoka and a spruce budworm epidemic near Westree in Gogama District. As yet, however, sprays could not be efficiently applied from the air; therefore aerial dusting with calcium arsenate was the method mainly employed. Next year the Department modified its DH 61 plane and continued operations against the hemlock looper, covering an area of seventeen hundred acres.⁵¹ But aerial dusting of insecticide was found to be not very reliable or efficient; and this was the last such use of aircraft in Ontario until the advent of the revolutionary DDT in the mid-forties. However, commencing in 1920 with the budworm epidemic in the Lake Temiskaming area,

aircraft have played a vital role over the years in the reconnaissance, detection and mapping of insect epidemics in Ontario.

Meanwhile, spraying from the ground with lead arsenate was developing throughout the 'twenties', as a means of controlling such pests as the red-headed pine sawfly in Southern Ontario plantations. In 1930 an outbreak of bark beetles in red and jack pine plantations at St. Williams caused much alarm; it resulted from a combination of dry weather and the accumulation of slash from pruning and thinning work. Dr. Swaine took personal charge of a campaign to stamp out this infestation by cutting down and burning infested trees, burning the duff and searing the soil with a flame thrower.⁵² But less effective results attended attempts to control the larch sawfly by the introduction of imported parasites.⁵³

During the depression years of the 1930's and the first years of World War II, research into forest insect problems and surveys of infestation in Ontario remained at a low level. The insects themselves, however, were not idle; and new outbreaks and epidemics, especially of spruce budworm, were detected by the Department's foresters in northern Ontario. In 1939, at the Department's request, an experienced federal entomologist, K. E. Stewart, was brought from Saskatchewan to Angus for four years to help develop efficient spraying methods for control of the jack pine budworm and sawflies in plantations; lead arsenate applied with a motor-driven hydraulic sprayer was found to give good results.⁵⁴

The jack pine budworm epidemic and the extension of the spruce budworm epidemic in northwestern Ontario caused widespread alarm in the pulp and paper industry. In December, 1943, the Minister of Lands and Forests (Hon. W. G. Thompson) convened a special conference of departmental officials, forest industry representatives and federal entomologists, to consider the budworm problem. The conference recommended the provision of a large-scale aerial dusting programme and a better system of detecting insect outbreaks in their early stages; the establishment of a chair of entomology and special training courses at the University of Toronto; the building of a central laboratory for insect research in Ontario; and an increase of two hundred thousand dollars in the annual federal budget for insect research in Ontario.⁵⁵

Next year, 1944, Stewart was transferred from Angus to Algonquin Park and began experimenting with the use of a new revolu-



Close-up view of the budworm



Viewing the damaged trees

tionary synthetic insecticide, DDT, for aerial spraying. It is significant that during the 1944 tests the Department brought in several zoologists from the University of Toronto to study the effects of DDT on fish and wildlife. Because of the urgency of the budworm problem the Department continued its tests in 1945 on a much wider scale, using three R.C.A.F. Canso amphibious aircraft to spray two blocks of timber covering sixty four thousand acres southwest of Lake Nipigon – the largest programme of its kind in the world at that time.⁵⁶ This programme provided basic knowledge for further operations in the United States and Canada. Also, under the Department's auspices, the United States Fish and Wildlife Service made a special study of the effects of DDT spraying on bird populations.⁵⁷

During the years that followed several further important attempts were made at insect control, both from the air and on the ground. In 1953 the Department, in cooperation with the Canada Department of Agriculture, coordinated a programme to control the European sawfly in southwestern Ontario by spraying plantations and windbreaks with a virus disease of the sawfly. This project was the largest attempt yet made in North America to control a forest insect with virus.⁵⁸ Aircraft and helicopters have also been used to combat, by spraying, the forest tent caterpillar and the hemlock looper (1952),⁵⁹ and the white pine weevil (1957-1963).⁶⁰ Currently the Department is looking to the latest techniques for control of insects – the use of insecticides which are absorbed into the trees, and the use of sterilized insects which are released among the natural insect population.⁶¹

Even before this the Department was active in efforts to secure earlier detection of insect problems. Thus in 1942 the Minister instructed all District Foresters to assign field staff to making collections of insects, as part of the national forest insect survey being developed by the Canada Department of Agriculture.⁶² For a couple of years this involved the full-time employment of insect rangers, who were later transferred to the federal service. Subsequently, for a number of years the Department gave summertime employment to university forestry students, to enable them to work on various insect research projects.

By 1941 the federal Government had developed its forest insect work in Ontario to the point of providing expert advice through

professional entomologists located at five centres across the Province – northwestern Ontario (from Winnipeg), central Ontario (from Ottawa and Laniel, Quebec), Petawawa (summer only), Angus and Ottawa. In that year the federal Department of Agriculture approached the new Deputy Minister of Lands and Forests, F. A. MacDougall, with a plan for further extension of its work in Ontario, in cooperation with the Department. Agreement was reached to establish new permanent headquarters for the entomology work in central Ontario at Sault Ste. Marie. In 1945 the federal Government and the Government of Ontario signed a formal agreement to co-operate in the work, on terms which made Ontario responsible for providing the laboratory for the use of the federal Department of Agriculture, while the federal Government agreed to staff and equip the building and conduct research there, giving preference to the forest insect problems of Ontario. A joint committee of six members was set up to advise on the annual programme to be undertaken.⁶³

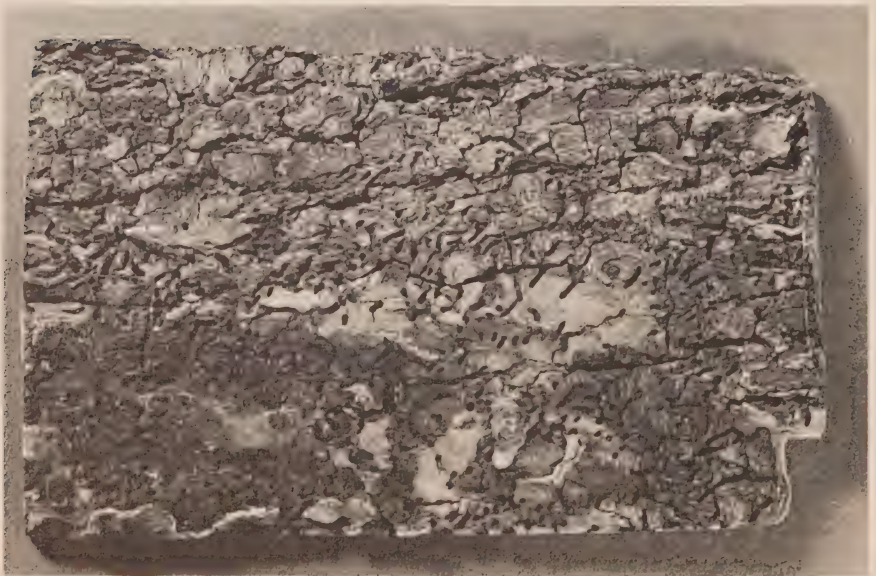
The Forest Insect Laboratory was built at a cost of \$285,000 and was opened in 1946. At completion it was considered the finest building of its kind in North America.⁶⁴ The agreement between the federal and provincial authorities for sharing its use remained in force until 1952, when it was superseded by a fresh agreement which included forest pathology.⁶⁵ Throughout the critical period when these negotiations were being conducted, the Department's spokesman on entomology was J. A. Brodie, who also represented Ontario on the national Forest Insects Control Board during its existence from 1945 to 1952.

In early years the laboratory devoted most of its attention to the spruce budworm. Then, as new problems came under its purview, it was enlarged in size and its staff increased to some sixty year-round employees (1961-62), in addition to twenty-two permanent insect rangers. These insect rangers now form an insect detection service, which relies heavily on the Department for the use of aircraft and other services to enable them to map areas of insect activity, etc. In most cases the men are stationed at departmental field headquarters.⁶⁶

When first opened, the laboratory was much concerned with the possibility of controlling insects through the use of viruses, fungi and bacteria. However, for this highly specialized field, it soon be-



Girls collecting spruce budworm larvae at insect laboratory



Feeding-scars made by the elm-bark beetle

came apparent that a special laboratory would be required. Consequently the Insect Pathology Research Institute was established in 1949, also in Sault Ste. Marie, and is a wholly federal laboratory devoted to investigating problems across Canada.⁶⁷

TREE DISEASES. Forest pathology may be defined as the science that deals with diseases of forest trees. However, this definition covers many aspects, and for historical purposes will be restricted to infectious pathogens, and from the standpoint of organized control programmes, specifically to parasitic fungi. On the North American continent organized work in this field began in Missouri in 1899; but it was the discovery of the chestnut blight and the white-pine blister in New York State in 1904 and 1906 respectively that significantly stimulated research. Each of these was introduced from abroad.⁶⁸

In Canada the pioneers of forest pathology were J. H. Faull of the University of Toronto (1905) and H. T. Gussow, the Dominion Botanist. At the first meeting of the Canada Commission on Conservation in 1910, Gussow stressed the importance of establishing a regular system of inspection of Canada's forests to detect disease problems in their early stages.⁶⁹ This was not completely fulfilled until 1951, when tree diseases were officially added to the duties of the insect ranger service.⁷⁰

One of the earliest (1895) killing tree diseases encountered in North America was the 'damping-off' fungus, an organism that kills seedling conifers in nurseries. This was the first disease mentioned in the Department's Annual Reports, (1914), and it continued to plague nursery practice until the new fungicide 'captan' came into general use in Ontario in the mid-1950's.⁷¹

The most important forest disease in Ontario has been the white pine blister rust, discovered first at Guelph in 1914,⁷² not long after several hundred thousand white pine nursery stock had been imported from Europe for use in reforestation work in Ontario. Concurrently the disease was found on its alternate host plants, currants and gooseberries (*ribes*). Following a conference of Canadian authorities in Ottawa in 1916, the Department appointed inspectors to scout for the disease. Next year a campaign was launched to eradicate the alternate host plants – the first recorded attempt to control a forest tree disease in Ontario.⁷³ However, though this

programme proved successful in areas such as the St. Williams nursery, its effectiveness was limited to those localities where the tedious task of pulling out ribes plants by hand could be justified. Not until the discovery of growth hormone herbicides in the mid-1940's, did rust control in forested areas generally become practicable. In 1954 the Department began using herbicides to kill ribes plants, and succeeded in controlling blister rust in two forested areas intensively managed for the production of white pine. In the past ten years the programme has been extended to the major white pine areas as far west as Sault Ste. Marie. As a result, confidence has been restored in our ability to grow commercial crops of white pine, and general nursery production of white pine has revived and increased.⁷⁴

In 1918 white pine was afflicted by a new disease, needle blight. The Department then engaged Dr. Faull to investigate the pathological condition of the white pine forests; which led to a better understanding of needle blight, sulphur fume damage and other diseases of the northern forests.⁷⁵

The most devastating of all forest diseases has been the chestnut blight, which by 1930 had killed one-half of our native chestnut trees* and infected most of the remainder.⁷⁶ So far no remedy has been found, although scattered specimens of the chestnut still survive. Among other recent serious tree diseases are the Dutch elm disease, which is controllable to a limited extent; and fomes root rot, discovered in 1955 and so far confined to a few localities in southern Ontario.⁷⁷ A control programme now under way is expected to confine this potentially serious root rot to a minor status.

It is significant that our most damaging forest diseases, white pine blister rust, chestnut blight, Dutch elm disease, and fomes root rot, all came from other countries, principally on imported nursery stock.

In 1949 Ontario concluded an agreement with the federal Government to provide for research into forest diseases, on the same basis as the entomology agreement of 1945. This led to the establishment of a new Laboratory of Forest Pathology at Maple, occupied in 1953 by the federal Government. Since then, creation of a new Department of Forestry at Ottawa in 1960 has led to a revision of the original agreement between Ontario and federal authorities.⁷⁸

*Not to be confused with the horse chestnut commonly planted along city streets.

In conclusion, it should be pointed out that chemical pesticides, particularly insecticides, have been a great boon to the health and welfare of man throughout the world. In forestry, especially in North America, they have permitted a level of protection and management not otherwise possible, either physically or financially. However, these chemicals have also brought problems, because by their very nature they are poisonous to some degree to almost all forms of animal life. Therefore care and good judgement must be exercised in their use.

Instances of misuse have resulted in a growing concern by scientists over the past ten or fifteen years; and this issue, clouded by considerable controversy, culminated in the appearance of Rachel Carson's best-selling book *Silent Spring* in 1962.⁷⁹ Although the book has been criticized for exaggerating the overall picture by citing only extreme examples of misuse, it has nevertheless fulfilled a great need by making the general public keenly aware of the dangers and problems, and has resulted in many millions of dollars being diverted into more intensive research, particularly in the U.S.A.⁸⁰

From the advent of DDT to the present, the Department has had a very cautious approach to the use of chemicals in forest protection, especially as applied by aircraft, and uses them only when important economic values are in jeopardy and no alternative method is available. This guiding principle and example set by the Department has been a significant factor in trying to preserve a forest environment in Ontario which is free from pollution by pesticides applied within the Province. Although increasing investments in the forest will call for higher standards of pest control in the future, it is expected that emerging developments in chemicals and pest control methods will make this possible without creating any additional problems.

12

THE START OF THE AIR SERVICE



After the First World War a surplus of aircraft and demobilised pilots became available for civilian work in Canada. It occurred to “Nick” Carter, one of the pilots of the Federal Air Board, that some of these aircraft might prove useful in the work of the Ontario Department of Lands and Forests.¹ To test this idea Deputy Minister Albert Grigg instructed E. T. Ireson, an Ontario land surveyor, to accompany an expedition that was flying north into the James Bay area, under the sponsorship of the Canadian Aero-Film Company. Accordingly in 1920, from a base at Remi Lake near Kapuskasing, ex-R.F.C. flying instructor W. Roy Maxwell made four flights in an HS2L flying boat to James Bay and back, taking Ireson as his passenger.² The flights, made under extremely adverse conditions,

enabled Ireson to bring back enough useful topographic information and observation of forest fires to convince the Department that air operations were feasible and might be of value to its work. These first flights were significant in that a Department employee was instructed to accompany them; the pilot was later to become the first director of the Provincial Air Service; and the base selected for the flights has, with a slight change in location on Remi Lake, continued down to the present day to serve as the main operating base of the area.

In 1921 the Department undertook a more systematic experiment, in the form of an aerial survey of the timber resources in the north western part of the Province. This involved the use of three HS2L flying boats, which were again supplied by the Air Board, with Carter acting as senior pilot; but this time the operating base was at Sioux Lookout. The sketching team that made the survey consisted of two foresters, R. N. Johnston, formerly of the R.F.C.-R.A.F., and F. T. Jenkins.³ They experimented with aerial cameras, which they used to take oblique photographs of the terrain, after they had first sketched it out into blocks of about twelve miles square. The oblique photographs could not show the differentiation of forest types, but did supply details of the drainage road pattern etc. in the area. These provided the sketchers with key indications to which they could relate the forest types when they came to mark them on the base maps subsequently prepared. The H-Boats were all open cockpit planes; therefore the photographer or mapper had to stand in the open nose of the plane with nothing in front or on either side of him, gripping the survey camera which was supported by a steel shaft embedded in the aircraft's hull. The planes were slow and heavy and sometimes had difficulty in taking off from small lakes. Johnston has recalled that on more than one occasion it was necessary to fasten the plane's tail by rope to a nearby tree, start the engine to build up speed and then cut the rope, in order to become airborne in the shortest possible distance.

The programme of sketching from the air forest-type maps proved very successful. About two hundred thousand square miles of territory between the Manitoba Boundary and Lake Nipigon were covered; and the maps completed during the following winter by Johnston and Jenkins were the first accurate records that had yet been made of the geography and timber resources of the area.

AERIAL FOREST TYPE MAP SHOWING A PORTION OF THE JAMES BAY WATERSHED

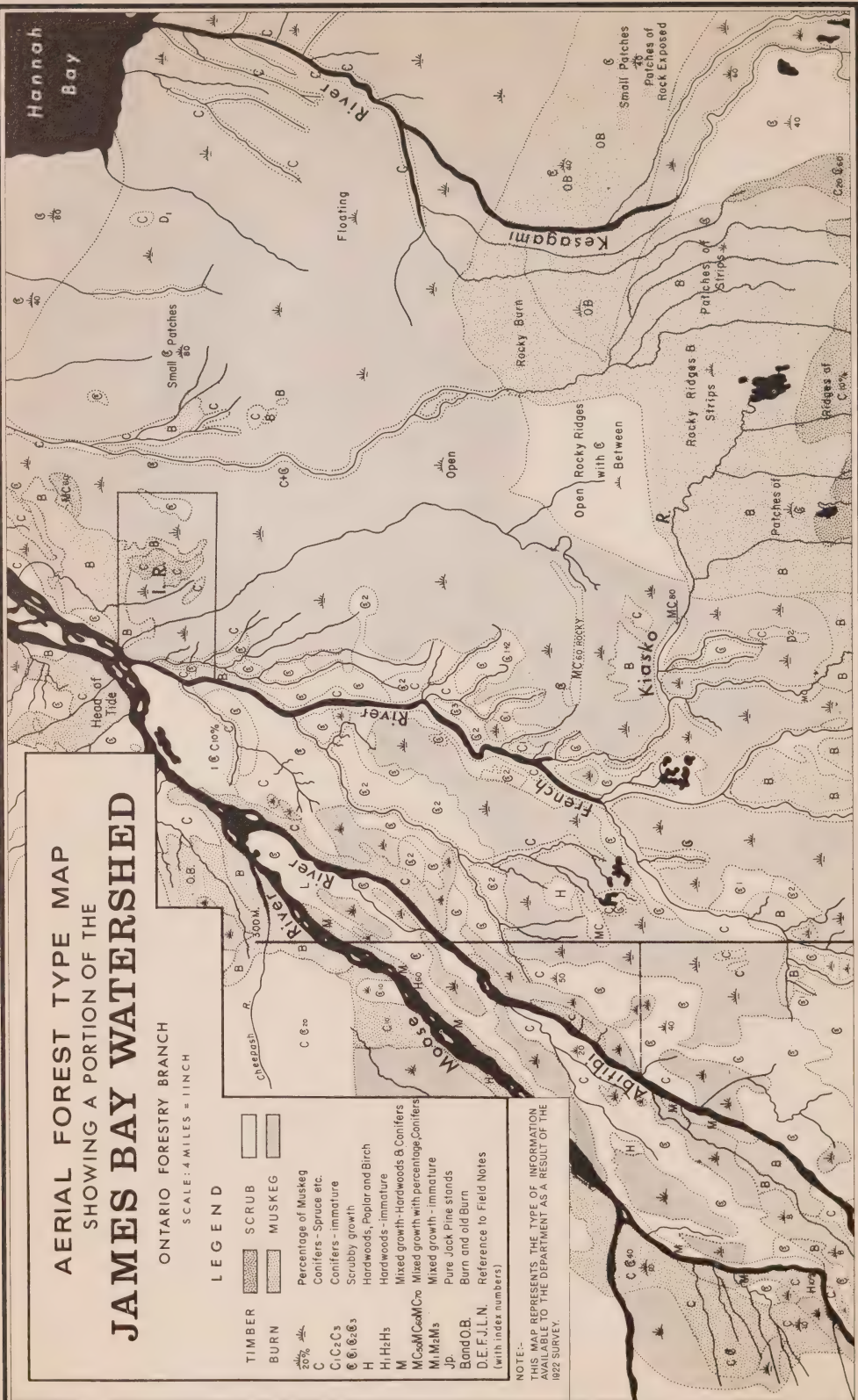
ONTARIO FORESTRY BRANCH

SCALE: 4 MILES = 1 INCH

LEGEND

TIMBER	SCRUB	
BURN	MUSKEG	
25%	Percentage of Muskog	
C	Conifers - Spruce etc.	
C1 C2 Cs	Conifers - immature	
6 6 6s	Scrubby growth	
H	Hardwoods, Poplar and Birch	
H1 H2 Hs	Hardwoods - immature	
M	Mixed growth - Hardwoods & Conifers	
MCaM C1 C2 C3	Mixed growth with percentage Conifers	
M1 M2 Ms	Mixed growth - immature	
Jp	Pure Jack Pine stands	
Band OB	Burn and old Burn	
D E F J L N	Reference to Field Notes	
(with index numbers)		

NOTE:-
THIS MAP REPRESENTS THE TYPE OF INFORMATION
AVAILABLE TO THE DEPARTMENT AS A RESULT OF THE
1922 SURVEY.



Further, during one of the flights made in August, 1921, Johnston sighted and reported a forest fire burning on an island in Cliff Lake in the Sioux Lookout district. This led to a ranger being flown out to take charge of its suppression. The episode, declares J. C. Dillon in his *Early Days of the Provincial Air Service in Ontario*, was "the origin of aerial forest-fire detection and of aerial fire suppression" in the Province.⁴

On their return to Toronto, Johnston and Carter discussed with Provincial Forester Zavitz the possibility of the Department's proceeding to establish its own Air Service to carry on the work in the future. Zavitz was sympathetic to the idea, but wanted more concrete evidence of the work that such a service could accomplish and of the suitability of the H-Boats for carrying it out. This evidence was supplied during 1922 when, again in co-operation with the Federal Air Board, three H-Boats and other aircraft were assigned specifically to the detection and control of forest fires in three newly created fire districts (Muskoka, Parry Sound and Algonquin Park). The aerial patrols reported any fires they saw by dropping messages in bags or by landing at a telephone or telegraph office. They also transported men and equipment to and from the scene of the fires. When not required for fire patrolling, they engaged in forest-type mapping and photography. Altogether these patrols flew 613.8 flying hours during the season.⁵

In the same year W. R. Maxwell, following up his successful flights with E. T. Ireson two years earlier, was requested by the Forestry Branch to provide the flights for an extensive ground and aerial survey of the James Bay region. By now Maxwell had become director of a private company, the Laurentide Air Service, formed by a Quebec businessman.⁶ The survey had as its purpose not only classifying the types of forest found from the air, but also estimating the quantities of timber of each forest-cover type. The operations comprised a ground unit, under the direction of Frank Sharpe, and an air survey unit under Jenkins. The staff included several foresters who later rose to prominence in the Department – such as J. A. Brodie (forest inventory), F. A. MacDougall (timber estimating), R. N. Johnston and H. H. Parsons (described by Johnston as "perhaps the most gifted aerial sketcher we ever had").⁷ The main base of the survey was once more at Remi Lake, and two H-Boats and other craft were used, flown by three pilots under the direction of Maxwell.

The results of this survey and of the fire spotting work done in the three districts, finally convinced Zavitz and the Minister, the Hon. Benaiah Bowman, of the value to the Department of having a regular air service. Zavitz was further impressed when, later in 1922, he made his first flight in person, in a Vickers-Viking plane piloted by Maxwell, over the scene of the recent disastrous Haileybury fire.⁸

The experience gained over three seasons of flying work had now shown that patrolling by air was the best means of detecting forest fires in remote areas; and that fire rangers formerly employed on canoe patrol could henceforth be grouped at strategic points, ready for immediate dispatch to fire-fighting duty. Also, it had proved that flying had definite value in forest survey work, and in other aspects of the management of Ontario's natural resources. Finally it suggested that a special type of aircraft might have to be designed for the fire protection work, with higher performance and lower operating cost than the types so far used.

Early in 1924 an important Dominion Conference on Forest Fires took place in Ottawa, to which the heads of forestry departments and their assistants from all provinces were invited. Zavitz and the new Minister, Hon. James Lyons, were both present and noted the emphasis that was being laid on air operations as a means of fire protection. After the conference the Minister announced that Ontario must have an air service of its own as soon as possible. He gave two reasons for his decision. First, the Province would be able to provide its own flying for about fifty dollars per hour, which was about half the best commercial rate obtainable by tender. Second, flying might reduce the enormous losses the Province was sustaining from fires; during 1923 over two million acres had been burned, of which twenty eight percent, or five hundred and seventy four thousand acres, were under timber.⁹

The HS2L flying boat was still the only type of aircraft available in quantity for the new service. It was a biplane with a seventy-foot wing span, equipped with a twelve-cylinder water-cooled Liberty engine consuming 30 gallons of gasoline per hour. This gave the plane a top speed of some seventy miles an hour, which meant that it took forty-five minutes to climb to an altitude of three thousand feet. The open cockpit in the boat's nose provided excellent visibility for fire detection, sketching, photography or trans-



W. ROY MAXWELL, *first director of the Ontario Provincial Air Service, 1923-34*

port. Immediately behind this cockpit were two seats for passengers, and further back space for the pilot and engineer. Leather helmet, flying goggles and heavy wind-proof clothing were essential to any kind of comfort during average weather.

Lyons' original intention was to purchase HS2L machines from the U.S. Navy Department; but he found that these could not be imported by the Ontario Government, on account of a military installation required while the aircraft were employed on submarine chasing duty.¹⁰ Accordingly, Lyons turned his attention to the Laurentide Air Service, in the person of W. R. Maxwell, whose organizing ability and efficiency, already attested to on the earlier flights, he much admired. Maxwell adroitly took advantage of this favourable situation; indeed, it is said that he played a behind-the-scenes part in deflecting the Minister's attention from the American source of aircraft to his own company. However that may be, on May 29th, 1924 Maxwell left the Laurentide Air Service to become the first director of the Ontario Provincial Air Service – a post he held for the next ten years. At the same time the Department purchased from the Laurentide Air Service a fleet of fourteen HS2L flying boats, which was later (1927) expanded to a total of twenty.

Maxwell was a first-rate organizer and operator. His operating principle, which he repeatedly drilled into his staff, was that the function of the Air Service was "to provide flying where and when required."¹¹ In procedural disputes between air and ground staff, which were not uncommon, his initial approach was in support of



Group of early pilots in 1924



Landing H-Boats at Sault Ste. Marie slipway, 1926

the ground staff. Although this did not make him popular with his air crews, it helped to cushion the inevitable criticism made by ground staff of whatever new procedures he felt bound to introduce. In the result he set up a well planned service which, with minor amendments, has carried through to the present day. Doing this in the early days of civilian flying was no small achievement, especially considering the high cost of maintaining a fleet which was continually in danger of becoming obsolete.

As a man Maxwell was both in dress and action a colorful personality, extremely jealous of his own reputation and prepared to make every effort and run serious risks in order to improve or maintain it.¹² For example, during his 1922 flight with Zavitz over the Haileybury fire area, one of the exhaust stacks on the Napier Lion motor began, early in the journey, to vibrate and threatened to break loose and wreck the propeller. In spite of the urgings of his engineer, Maxwell refused to turn back and completed a two hour flight without incident; but as soon as the mechanic began to examine the exhaust stack, it practically fell off in his hand! Such risk-taking helped to build up the flyer's reputation as a daring aviator.¹³

Maxwell neither drank nor smoked and was generous to a fault so far as money or possessions were concerned. Part of his rather flamboyant personality, however, found expression in owning and operating a huge royal blue 12-cylinder Cadillac car. This piece of equipment, so conspicuous in this early automobile period, brought on his head considerable criticism; though Maxwell himself made no attempt to hide the fact that his car was frequently serviced by Air Service mechanics and refuelled at the government gasoline pumps!¹⁴

He brought with him into the Air Service a nucleus of men who developed into a notable group of pilots, engineers and craftsmen.¹⁵ Some were ex-Service flyers or came over with him from the Laurentide Company. Others were promoted inside the Service or trained at the Department flying school which he established in 1928 at Lake Ramsey, near Sudbury. His original list of pilots included several men nearly as colourful as himself – such as Duke Schiller, a former speedboat operator for Gar Wood, who possessed a stentorian voice and a special skill in bringing H-Boats up to a buoy more accurately than anyone else; and Terry Tully, an Irish-

man who later lost his life attempting to duplicate Lindbergh's famous trans-Atlantic flight. All of the pilots, it has been said, possessed "a peculiar complex of ingenuity, resourcefulness and calculated daring, with a special regard for safety of life and equipment and a constant alertness to every emergency."¹⁶ At that period forced landings in remote and unmapped territory were an ever-present possibility; and there was no means whatever, in such cases, of communicating with the outside world. In fact, therefore, these "bush" fliers of the 'twenties can be fairly compared, in their daring adventures and readiness to face unknown perils, with the astronauts of today.

From an early date, it became the practice to send an observer aloft to accompany the pilot. He sat in the cockpit of the plane scanning the country around for signs of smoke, or looking down on the forest to estimate the timber beneath him, or dropping with surprising accuracy the occasional message as required. Reg Johnston, who had charge of this branch of the work, summed up the qualities of a good observer as "someone who would tell the truth, had good eyesight, could read a map and was not subject to air sickness."¹⁷ A good fire-spotter was expected to know how to plot accurately the location of any fire he saw and estimate its extent in acres. He must describe the best and quickest way to reach it, indicate what water was available for pump use, estimate the fire's direction and probable rate of spread, and suggest the number of men likely to be needed to control it. In virtue of his position in the open cockpit, the observer could see more than the pilot and engineer. He therefore had to act, in a sense, as navigator, keeping the plane directionally on its flight course. Some pilots naturally resented sharing this responsibility with the observer, who was after all only a member of the ground staff of the Service. But the situation continued on this basis until 1927, when sixteen De Havilland Moths were purchased.¹⁸ As these planes were tandem-seated and carried no engineer, the pilot then had uninterrupted visibility, except straight ahead; so the need for an observer-navigator began to wane.

Another important group of staff were the riggers and fitters, who maintained the aircraft. The early H-Boats with their huge wingspan and network of spars and struts took a great deal of "rigging" and maintenance work. Sailmakers for wing upkeep, and boat

builders for hull repairs, were equally essential. Compass-swinging, alone, was a major operation.

Soon after his arrival Maxwell selected Sault Ste. Marie (in the Minister's constituency) as centre of operations of the Air Service. The St. Mary's River was free of ice from very early in the spring of each year until late in the fall; a fact which made it a strategic site for operational purposes. One of Maxwell's reasons for choosing it was the continuous red glow that appeared nightly on the St. Mary's River, caused by a carbide manufacturing plant on the Michigan side that used an open-flame process of manufacture. Maxwell's previous flying experience told him that this red glow on the river would provide an extremely useful landmark for pilots approaching the Soo at dusk or landing there in unfavourable weather. His theory proved correct, and many a pilot welcomed this familiar beacon in the years to come.¹⁹

Early in 1925 a large hangar, measuring eighty by one hundred feet, complete with slipway, was ready for occupancy in Sault Ste. Marie. This building served its purpose until 1946, when it was modernized and greatly enlarged to a capacity which could accommodate fifty aircraft together with their maintenance and equipment. The Sault district office of the Department was also located in this building. Originally three air bases at Remi Lake, Sudbury and Sioux Lookout had been acquired from early commercial enterprises. Gradually additional bases were established, until at the present time twenty-eight bases are maintained throughout the fire season, while twelve are operated all the year round.

During the lifetime of the HS2L aircraft (1924-1932) and their immediate successors, the frequent occurrence of forced landings made it more and more desirable to develop some method of getting word back to base from a disabled aircraft. For a brief period it seemed as if homing pigeons might be the answer; and a pigeon loft was actually constructed for their use on the roof of the hangar at Sault Ste. Marie. But after a three year experiment this project was abandoned, in the light of the growing utility of radio.²⁰

In 1924 Monty Baker, who had joined the Department as an observer, built the first effective short-wave transmitter and receiver. The receiver was established at Sudbury base and the transmitter installed in an H-Boat, where the sending key was attached to a board strapped to Baker's knee. He sent out his messages by



Changing an H-Boat Liberty motor at Orient Bay in 1925



DeHavilland Moth "Wren" on slipway at Sudbury, 1922

code, not voice. With this set Baker, during a flight that summer, spotted a fire in Scotia township, Sudbury district, and, while the aircraft circled the fire, tapped out in code the information to Sudbury base. This was the first time air-to-ground radio was used successfully to report a fire. Later Baker was joined by Charlie Ward, who had previously designed and operated Toronto's first broadcasting station. The two men, working together, built and tested the equipment for four ground receiving stations – the nucleus of what later developed into a province-wide network of radio stations – and in 1930, installed an improved transmitting-receiving set (still using code) in a Fairchild K-R 34 seaplane flown from Algonquin Park base by Frank MacDougall. Subsequently, Baker concerned himself specially with the use of radio on lookout towers.*²¹

At first the sets were used only for Departmental messages; but soon pressure for some form of quick communication from mining camps to the outside world compelled the Department to accept public messages. These were carried free at the outset; but later were charged for under a contract for collection of tolls arranged with the Canadian National Telegraphs at Sioux Lookout.

In 1937, as the result of agreement between the Crown and Canadian Marconi, the commercial and non-commercial aspects of this Service were separated; the Department being left with its one network of forty eight seasonal summer stations.²² This network, known at the time as the Ontario Provincial Radio Service, established new and powerful stations at Red Lake, Pickle Lake, Kenora and Sioux Lookout, and lesser-powered radio telephones to private interests. The use of these facilities made it possible, for the first time, to make telephone calls to and from the outside world.

Today (1966) this network has grown to two thousand two hundred and forty seven stations. Under the skilful management of C. E. Lloyd, it has become a vital factor in tying together the far-flung Lands and Forests empire in Ontario, and is generally regarded as one of the most up-to-date services of its kind in the world.

Soon after the change of Government in 1934 a Royal Commission was appointed "to enquire into the Ontario Provincial Air Service." Although no report of this Commission is available, the recom-

*Baker and Ward were also responsible, with R. N. Johnston, for designing and developing an improved portable engine-driven pumper for extinguishing forest fires, which was used in several districts before World War II.

mendations made at the end of the proceedings in September indicate the main feature of the Service which it found required improvement. They included better bookkeeping and audit, purchases by tender, measures to minimize unnecessary flying, greater use of aircraft for other work beside forest protection (but not for mining or pleasure trips), reference back of all major purchases for approval at ministerial level, discontinuance of use of fire hazards for relief purposes and better co-ordination of air and ground staffs. During the enquiry the director, W. R. Maxwell, became a main target for criticism, being accused of showing favouritism in his organization and of allowing confusion in his accounts.²³ He was dismissed from his position and succeeded by G. E. Ponsford, an able administrator and experienced pilot – and incidentally a great friend of Premier Hepburn. Ponsford introduced various economy measures into the Air Service and straightened out its shortcomings, but otherwise made little change in the organization. He retired for health reasons in 1961. Meanwhile Maxwell had engaged, rather unsuccessfully, in various private undertakings and died about 1950.

The safety record of the Air Service has been remarkably good, considering the many thousands of fire fighters it has flown in and out of small uncharted lakes and the countless numbers of emergency flights it has made, often under bad weather conditions. Between 1924 and 1952 there were eleven fatal crashes, one of which included a seriously-injured child being flown to hospital on a “mercy” flight. The other ten crashes took the lives of nineteen Lands and Forests personnel, of whom thirteen belonged to the Air Service; two were passengers not employed by the Department.²⁴

From time to time the Department has replaced its older planes with more modern aircraft as they became available. During World War II, naturally, there was a slow-up in this process; but at that time the Air Service staff took the opportunity to build its own planes – four Buhls CA-6 aircraft – in the hanger at Sault Ste. Marie. These Buhls, in size and capacity, compared favourably with the medium transport in the Service. From 1944 to 1952, fourteen Norseman planes were purchased and served as the “work-horses” of the Air Service. The Beaver made its appearance in 1948. Designed in every respect to meet bush flying requirements as a semi-transport airplane, it has far surpassed all expectation, and rapidly superseded the older types of aircraft. By 1952 the fleet consisted of forty



1948 Beaver



Turbo Beaver in the air, 1965

Beaver planes and only one Norseman. Thereafter it became the Department's policy to do away, as far as possible, with the need for spending money to hire additional aircraft to supplement the government-owned fleet in periods of severe forest fires. Instead, the fleet was to be maintained at a strength which would take care of all normal requirements, while commercial aircraft would only be hired in cases of emergency.²⁵

By 1965 the fleet had reached a balanced complement for normal purposes of thirty three Beavers and ten Otters.²⁶ During 1965 six newly developed turbine-powered Beavers were purchased, and orders placed for twin-engined Otter planes also with turbo-power.

Down to 1932 the fleet did not operate in the winter season; but from that time on, it became regular practice to operate a number of bases during the winter. Winter flying consists mainly of work in connection with timber and wildlife, general inspection, "mercy" flights and other essential air travel required by all government departments. An average of twenty "mercy" flights are carried out each year, mainly for medical reasons. Examples of the kind of trouble encountered are "American tourist suffered heart attack", "boy suffered broken leg", "pulp cutter with severely cut leg" and so forth. Upon one occasion in 1929 the then Deputy Minister of Lands and Forests, Walter Cain, was the object of a much publicized "mercy" flight. Travelling in a plane piloted by Maxwell, he was stricken with appendicitis while on a mission carrying treaty money to James Bay Indians. The plane was forced, for lack of fuel, to land on a remote lake. After four days of hectic press headlines proclaiming both men "lost in the wilds," they were found; and Maxwell was able to fly his unlucky passenger, who by then was in agony, to hospital at Sioux Lookout.²⁷

From the early days of the Service the forest protection staff had envisaged the employment of aircraft in a direct fire-suppression role. Experimental dropping of water from aircraft floats equipped with special valves for filling and releasing water began in 1945, using a Norseman aircraft. In an endeavour to find a faster method of releasing the water, attention was turned in 1950 to the use of paper bags each containing about three gallons of water. The bags were released in salvos of four, six or eight by a specially-designed conveyor arrangement; this proved to be moderately successful in holding small fires. Then during the winter of 1957, the Air Service pioneered an entirely new method, involving the free dropping of



Otter aircraft "Ody" dropping a load of water

water from rotating tanks mounted on each float. This system was further modified in 1964 to become a single rotary tank mounted between the floats, close to the fuselage. Recent engineering developments have produced a still newer method, tested in 1966. This quickly releases the water in the floats by a single operation, giving a better drop pattern and improved flying characteristics.²⁸

Several times, in the history of the Service, individual pilots have been officially honoured for distinctive achievement by the award of the McKee Trans-Canada Trophy, which is annually presented by the Minister of National Defense for operations tending to advance Canadian aviation. In 1931 this trophy was awarded to George H. R. Phillips for meritorious service in the advancement of aviation in Canada during 1931. At other times three ex-Provincial pilots, Doc Oaks, Pat Reid, and Romeo Vachon were similarly honoured – also Tommy Siers, a former air engineer. Again, in 1964 the same trophy was awarded to Frank MacDougall, the recent Deputy Minister, for his many years of energetic activity in building up the Ontario Air Service to its present high level. Four former pilots were also similarly honoured after they had left the Ontario Air Service for other fields of aviation.

13

PULP AND PAPER— A NEW FOREST INDUSTRY



As early as 1892 the Department noted that a new forestry industry – the cutting of pulpwood for paper mills – had made its appearance in the Province. Aubrey White, after receiving a number of applications to cut timber on unlicensed land in New Ontario, recommended that the Government encourage the growth of this new industry, “which will no doubt cause the expenditure of large sums of money in newly settled parts of the province and afford employment to numbers of people there during the winter season.” Permits to cut pulpwood were therefore issued in areas where no valuable white pine stands could come to any harm from trespassers or fires.¹

The same year the Province and the Sault Ste. Marie Company entered into an agreement which set the pattern for all subsequent

pulp contracts. Its terms required that by December, 1895, the Company would spend two hundred thousand dollars in specified instalments and employ three hundred hands for ten months of the year. When it had spent twenty-five thousand dollars and posted bonds as deposit, it would acquire the right to cut spruce, poplar, tamarack and jack pine at favourable rates. As suitable wood was not readily accessible in the Sault district, the Company received permission to cut on fifty square miles of territory "running back upon either side of one or more rivers flowing into Lake Superior and west of Sault Ste. Marie." The agreement went on to specify that the license was not to impede the settlement of the land, which it was hoped would proceed as rapidly as clearing would permit. The Company was promised compensating areas for any land taken up by the expected hordes of settlers.²

By the turn of the century agreements had been negotiated for the construction of five more mills on the Nipigon, Spanish and Mattawa Rivers, at Renfrew and Sturgeon Falls. Some concerns argued that capitalisation would be impossible unless the financiers knew pulpwood supplies were guaranteed; and as a result several of the agreements were signed before the companies were adequately financed, though the government attempted to curb speculation by demanding deposits and construction guarantees. Virtually all had a similar financial background. Most of the capital came from American interests who took care to include many local lumbermen on the subscription lists.³ By 1900, two million six hundred thousand dollars had been expended in construction and nine hundred men were working for ten months of the year in pulp and paper plants. The discovery, during the 1900 explorations of the area, of extensive pulpwood stands between the height of land and James Bay led the Commissioner of Crown Lands to predict that "with the higher prices and greater demand for this class of raw material we may confidently look for a great expansion in the pulp and paper industry in the not distant future."⁴

However, actual progress was failing to meet expectations. Only two mills were producing, two others were under construction, and four more were facing financing difficulties. But the Department was tolerant. It reminded the impatient of the vast financial resources needed before any pulp and paper venture, with its massive facilities, could be undertaken. Plentiful supplies of wood and water had

to be located close at hand and heavy equipment moved into remote areas to harness the power and grind the wood. Even more important, the mills had to have reliable markets and cheap transportation to them. Until all these factors were favourably united, progress in the industry would be cautious and gradual. "It is better", the Department warned in 1901, "that investors should make haste slowly than that there should be a collapse of even one large concern, which might shake the confidence of the people in the value of our pulpwood resources." Eventually, the United States, supplies would be exhausted and then Ontario's resources would be fully used.⁵

But evidence was mounting that these early developments were premature. In 1903 the Sault Ste. Marie Pulp and Paper Company declared itself bankrupt, leaving the small Sturgeon Falls plant as Ontario's only operating mill. The Spanish River mill was still under construction; and as of 1903, the five other limit-holders had done nothing to fulfill their contracts. Deadlines had been extended repeatedly. The Nipigon Company had received more time because the Lakehead lacked adequate transportation facilities; the Montreal River Company because of the "disinclination on the part of the capitalists to invest in industrial operations in Canada . . . (be cause of the) tightness in the money market" and the collapse of the Soo properties.⁶ The Soo Mill resumed production in 1905 after financial reorganization; the Sturgeon Falls Company, under new English ownership, increased its capacity and the Spanish River Company commenced operations; but the first exuberance of development had been effectively dampened.⁷

A boom in the lumbering industry more than compensated for this disappointment. The lumbermen were enjoying an unprecedented prosperity caused as much by an unexpectedly strong demand arising from a building boom in the United States, as by the Ontario Government's decision, in 1897, that all sawlogs cut on Crown lands must be sawn in Canada. Mills were hurriedly built at Sarnia, Midland, Victoria Harbour, Parry Sound, Collingwood and Little Current, principally by American interests. The Department estimated that one thousand men were earning an average of one dollar and fifty cents a day in the mills, while in addition the country received the benefit of the purchase of large quantities of supplies as well as freight charges.⁸ Even John Waldie, president of

the Lumbermen's Association of Ontario, could not help sounding the cautious note of optimism characteristic of his breed. The year 1899, he considered, would be remembered as "one of the most eventful in the history of the trade. Opening with low prices and a moderate demand, it closed with higher prices for common lumber than had ever been obtained either in Canada or the United States." The new year and the new century had begun "with a very limited stock of sawn lumber to meet the ever increasing local and foreign demand," a situation that promised stable prices for "the next six months at least."⁹ Thus encouraged, the centre of lumbering activity, which had already shifted from the Ottawa to the Georgian Bay-Lake Huron area, pushed further westwards to the Rainy River district. As the century turned, cutting was concentrated on the north shore of Lake Huron and inland around Sudbury. On the Spanish River system alone, twenty-five lumber companies operated more than one hundred camps, producing over two and one half million pieces a year.

Their operations were quite different from those on the Ottawa.¹⁰ In the spring the logs would be sent hurtling down the river – the Aux Sables, Mississagi, Spanish, Pickerel and French – to the booms, where forty to fifty men would be lined up on either side of the log lane, pulling the logs, butt-marked with the hammer of their company, into their own particular boom. Out in the bay, tugs coaxed the sorted logs into huge holding booms of over one hundred and fifty thousand pieces. Then came the crucial journey through the choppy North Channel into the open waters of Georgian Bay or Lake Huron. Two weeks of good weather were needed to tow a boom to the most distant mill at Sarnia. Storms breaking unexpectedly might strew the jostling, captured logs along the thousands of miles of shoreline, and sometimes the tiny tugs were towed to destruction by their wind-driven loads. At the mills, the choice pine saw-logs were manufactured into over one hundred million board feet of lumber annually.

While the Georgian Bay mills were running twenty-four hours a day, the Wisconsin mill-owners, striving to meet the heavy demand, turned their attention to the Rainy River pineries. Mammoth mills financed by the Wisconsin syndicates replaced the small plants that had flourished briefly in the 1890's. D. J. Arpin, backer of the Pigeon River Lumber Company, was the first to move into the region; but

he was soon followed by two groups who were to dominate the area for two decades. These were the Backus-Brooks and Shevlin, Clarke, Carpenter interests who combined to form the Rainy River Lumber Company. Further north, the Keewatin Lumber Company, owned outright by the Backus-Brooks group, erected a huge mill. The Rainy River, Georgian Bay, Sudbury and Ottawa mills, together, cut in excess of seven hundred million board feet of timber each year from 1900 to 1909.¹¹

Such unprecedented expansion was bound, eventually, to raise important political and administrative issues. The period from 1850 to 1900 had, on the whole, been one of expansion during which vast tracts of land had been licensed for timber production; but it had also been a period of considerable uncertainty; and the lumbering interests had not dared exploit the forests to the extent that became common at the turn of the century. They put heavy pressure on the Government to dispose of more and more timber lands, and the Government, always in need of revenue, proved ready enough to agree. The reasons given for the sale of 1903, which disposed of eight hundred and twenty-six square miles in the western parts of the Province, were typical. The Temiskaming and Northern Ontario Railway was driving its line through the pine stands of the Temagami and it was argued that, if left, the timber would possibly be destroyed by fire; if licensed, the land could be quickly cleared and opened for settlement. The Nipissing, Algoma and Rainy River townships were either endangered by fire from mining or railway operations or were desirable from a settlement point of view. Furthermore, though the lumbering trade had become second only in importance to the agricultural interests of the Province, there had been no large sales since 1871-2, when five thousand square miles were disposed of. This area and the Ottawa had supplied the mills for thirty-six years and now, at a time when the building boom had created an unprecedented demand, the best timber had been taken out. As a result, "unless the millowners are given an opportunity of acquiring additional timber by the holding of sales at reasonable intervals, the stream of revenues which has flowed into the Treasury from timber dues, etc., will be in danger of drying up." The sales of 1903 proved lucrative enough. Over and above the three and a half million dollar bonus the lumbermen paid for the privilege of applying for licences, the Treasury received annual ground rents of five

dollars per square mile plus timber dues on pine of two dollars a thousand board feet and fifty dollars a thousand cubic feet on square timber. The Department reserved the right to make first bid at the auction and stipulated that the timber be cut within ten years and sawn in Canada.¹²

But the Government's willingness to open timber lands soon brought conflict with its own previously established policy, particularly its slowly developing forestry policies. For more than two decades the advocates of scientific management of the Province's timber lands had been gaining influence with the public and the government. Before the turn of the century this had resulted in the Department taking steps to avoid the fate that had befallen the great pine forests of the United States, by then almost completely exhausted. The Forest Reserves Act was passed in 1898, setting aside "such portions of the public domain as may be deemed advisable for the purpose of future timber supplies." Settlement was not to be allowed in the reserved areas, which were "to be kept in a state of nature as nearly as possible." They were to be centres for recreation and initially mining and lumbering were to be excluded. Since the first reserves comprised cutover lands, this hardly concerned the lumbermen. Nor could they object to the Department's plans to encourage forest regeneration through adequate protection from fire and through experimental plantings. By 1901, however, when the rich forest lands of the Temagami area were reserved, the Government had decided that mining and lumbering could not be excluded.¹³

The creation of the Temagami Reserve raised the issue of how extensive such lumbering operations were to be; and Thomas Southworth, Director of the Bureau of Forestry, felt compelled to caution the Commissioner that timber policy, as laid down in the Crown Timber Act, conflicted with the forest reserves policy. The Timber Act was substantially the same as the Act passed in 1849, and the regulations created under it still reflected the philosophy of that period. Ontario's forest resources, so the early legislators had thought, were virtually inexhaustible and consequently timber administration was confined to disposing of the resources so that no one received special favours, while the Province received the greatest possible revenue. In addition, the Government was expected to act as an impartial arbitrator to whom the various interests using the

forests, the several branches of the trade and the settlers could appeal when they came in conflict. The reserves, on the other hand, had been set apart as valuable assets to the Province and as a "permanent, perennial source of revenue," a policy that could only be maintained if lumbering operations within them were very carefully supervised. If this were not done, Southworth argued, "nothing will be gained by setting apart the reserve, except perhaps the keeping out of settlement and preserving the timber from destruction by fire."¹⁴

He urged the Commissioner to provide in the Forest Reserve Regulations for close supervision of lumbering operations to prevent the cutting of immature trees and to lessen the danger from fire by insisting upon adequate slash disposal. But his suggestions were not incorporated in the 1902 regulations and, though the number of reserves steadily increased, the question was not resolved. Both the Government and the Department were aware that long-standing timber policies would have to be revised if Ontario was to avoid the forest depletion that had occurred elsewhere; but apart from setting aside the reserves, and then re-opening them to the lumbermen, very little was done.¹⁵

However, by 1900, the public had accepted many of the ideas put forward by foresters and their associations. It had also realized that the forest resources were not inexhaustible. Critics of the Liberal administration found that "forestry" had political value and, like the *Globe*, lectured the Government for selling timber lands exclusively for revenue purposes and for its lack of a "provident timber policy". The Department, in a memorandum drafted to answer the charges, pointed out that the Provinces of Ontario, Quebec, New Brunswick, and Nova Scotia had retained their lands and timber at Confederation and had always treated the proceeds of the sale of lands and timber as revenue.¹⁶ In Ontario the money derived from these sources was spent on roads and various other improvements. As for the gnawing fears professed by the Conservatives that the timber lands would soon disappear, the memo maintained:

It appears . . . that there would be no objections to treating money derived from the sale of lands and timber as revenue if what the *Globe* calls "a reasonably provident policy" was adopted. "The timber yield would then be virtually an assured crop and could be honestly



Example of bad utilization by a company exporting pulpwood



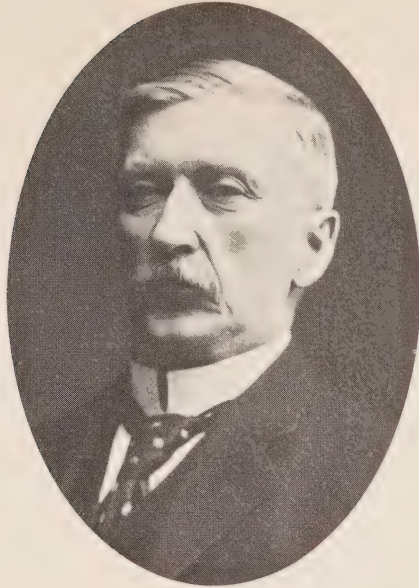
Waste on a pulpwood tie and log operation. Wood cut but not taken out of the woods

classed and chiefly treated as revenue." The question appears to be rather a question of management than one of principle.

The critics were reminded that the Liberal Government was protecting the forest from fire, preventing settlement in marginal areas, reserving lands chiefly valuable for pine timber for the future use of the Province, and acquiring cutover areas to ensure regeneration. The only additional step, concluded the memorandum, "would be planting, but in the present state of timber growth . . . that is not required." Debate on forest management had ceased to be confined to the relatively small group of men professionally interested in the subject. Henceforth it was to be a public issue, and one which became increasingly important as the provincial election of 1905 approached.

Since May, 1902, the Liberals had held a very slim majority in the Legislative Assembly. Repeated battles in the House and several by-election losses forced Premier Ross to call a general election for January 25th, 1905. The main theme of the ensuing campaign was the development of New or Greater Ontario. It was charged that northern Ontario had been neglected by the Liberals and, worse, had been ruthlessly exploited by timber barons aided and abetted by a revenue-hungry government. The Government countered these cries of exploitation with its record of reforestation and forest reservation. However, as the Government realized, a forest policy was a problem of degree, and the opposition made good their charges that not enough was being done. While the too obvious success of the lumbermen embarrassed the Government on the one hand, the clear failure of the pulp developments was equally awkward on the other. According to the Conservatives, the Government had granted huge "behind-the-door" concessions without public competition and had then been too lenient with the companies in its execution of the pulp agreements. These charges helped convince the public that the Liberal Government should end its thirty-three year tenure of office, and on February 8th, the administration of the forests passed to the Whitney government.¹⁷

The Conservatives had charged the Liberals with neglecting New Ontario and they lost no time in making it clear that they intended to follow a policy that would raise the status of the northern part of the Province. The most obvious change came in the Department of Crown Lands, for the old name was abolished in favour of a name



HON. F. COCHRANE, *first Minister of
Lands, Forests and Mines, 1905-1911*

that rang of the north: the Department of Lands and Mines.¹⁸ Just as obvious and quite as significant was the appointment of Frank Cochrane as Minister. A northerner himself, Cochrane had worked a small hardware business into a substantial concern during the height of the Ottawa timber trade. When the Sudbury mining boom began at the turn of the century he moved there, investing his capital in mining speculation and hydro-electric development. During the election of 1905 he acted as a Conservative Party organizer, and on a trip around the riding of West Nipissing during the icy January campaign, fell beneath the wheels of a train, severely mangling a leg. The limb had to be removed, but Cochrane recovered from the accident with remarkable speed. In no time a seat was found for him and in March he entered the Cabinet.¹⁹

Cochrane's first major step was to cancel five pulp agreements on the grounds that the investment and employment requirements of the conditions had not been met. He next moved to give various investment groups an equal opportunity to take part in pulp and paper development. Dr. Judson Clark, one of the few trained foresters in the civil service, prepared a memorandum outlining the objects and methods of selling pulpwood stumpages. Clark reported

that any agreement would have to assure the operator of an adequate supply and sufficient time to justify the investment in mill and machinery. Each should have equal opportunity in the market by having equal minimum costs for raw material. This could be attained if the Crown would take into consideration accessibility and transportation problems when assessing minimum bonus. The Province should expect the operator to safeguard the forest from fire: to pay an adequate price for the use of the resource and to make rapid direct returns to the economy by ensuring development as early as practicable. Clark urged that, wherever possible, sales be made through public competition at auction after due advertisement and opportunity for inspection. This, he maintained, was "by far the simplest, most equitable and above all most satisfactory method of determining the market value for stumpage."²⁰

In the same month as the old agreements were cancelled, February, 1906, they were re-offered for sale. Although the conditions of the new agreements were identical to those of the old ones, the method of sale was substantially different.²¹ Public competition was to be given free play, the five limits were to be advertised and the bonus, or what the companies were prepared to pay in addition to Crown dues, submitted by tender. The reform was a failure. In June, when the results of the bidding were announced, only two concessions were sold. Others were offered for sale again in 1907 but there is no record of any bidding.²² It was clear that investors were not interested and, in the years that followed, references in the Annual Report to the pulp and paper industry became extremely slight. A political change and a new method of sale could do no more toward realization of the promise held out for an Ontario pulp and paper industry.

The problem was the market. Like most Canadian manufactured products, pulp and paper had to fight a stiff American tariff. Although American supplies were running out, the situation was not yet serious enough to warrant wholesale investment in Canadian mills. Before that was necessary, American interests would try to import sufficient unmanufactured wood from Ontario to supply the existing American mills.

The new Government attempted to change forest policy, but it did not change its senior advisors; and the former Assistant Commissioner, Aubrey White, became Deputy Minister of the reorganized

Department. A man of social prominence and substantial influence, he guided the modernization of the Crown timber regulation in the following decade. Under the pressure of changes brought about by the shift of the centre of the trade from the Ottawa to the North and West, and the desire to bring timber revenue more in line with the actual cut, he reorganized the whole system of sale, regulation and dues collection, making the key to the new system a trained, reliable field staff of experienced cullers. A hint of the change occurred at the small timber sale of 1907. Although it resembled the many sales held by the Liberals, one clause in the terms and conditions indicated that closer supervision of cutting operations would be attempted. An officer of the Department, presumably from the local Crown timber agent's office, would attend the cutting to ensure that the timber was cut in an economical manner, that no merchantable trees were left uncut or unhailed, and that "no pine trees of less diameter than twelve inches at a distance of two feet from the ground shall be cut." A culler appointed by the Department and paid by the operator and the Department would measure the timber and "make a sworn return of such count . . . (showing) the number of pieces cut for any licensee or other operator and the varieties of timber and contents of each piece in cubic feet."²³ The return was to be submitted to the Crown timber agent in the district where the timber was cut. Dues and bonus would be paid before the timber passed from the agency, or at least a security given satisfactory to the Department.

White's next step was to collect bonus as well as dues on a thousand board feet basis instead of bonus on a lump sum per square mile system. This was experimented with in 1907, but more fully implemented in the 1909-1910 season. On the basis of the 1907 experiment, the Conservative election propaganda of 1908 proclaimed the advantages of the new timber policy. The operators paid only for what they took out of the forest, argued one pamphlet, and on the other hand, the sworn return of the government-appointed cullers guaranteed that every foot of timber removed from the limit was paid for. By this method, continued the pamphlet, "the element of guesswork has been eliminated and a timber sale takes its place as a business transaction rather than a Big Guess."²⁴ Thus, in the timber sale of 1909-1910 the timber was sold by tender, not public auction, with cutting rights going to the



Alternate strip-cutting in a spruce forest, Port Arthur District

operator who submitted the highest rate per thousand feet board measure, inclusive of Crown dues.²⁵ Since the bonus bid was usually several times larger than the nominal Crown dues, provincial revenues benefited from the accuracy of the new system. At the same time, a heavy responsibility fell upon the field staff of cullers, whose sworn returns would determine not only the dues, as before, but also the bonus.

According to its propaganda the Whitney Government pursued a policy of holding timber sales “only as the timber is endangered by fire or for some other good reason,” and not simply to fill the public coffers.²⁶ When fire and windfall made sales necessary, the affected areas were cut up into small berths to allow the independent operators a chance. This policy was effective and popular with the electors, settlers and timber operators, and the affable, popular promoter, Frank Cochrane, personified it. At the same time, White applied his intimate knowledge of the field, and his great personal influence to the task of guiding the new programme through its difficult first stages. The reforming zeal of the new administration had combined with Aubrey White’s experience to set out the new lines of forest regulation. Yet the new policy, despite its intrinsic merits, depended upon the determination of the Minister and the firm control of the field organization by the Deputy Minister. It was soon to be severely tested.

William Howard Hearst succeeded Cochrane as Minister in 1911, and on Whitney's death in 1914 became Premier. His "Pink Tea Administration", as it came to be called on account of its indecision and vacillation, proved no match for the "timber barons". Howard Ferguson, who took over Hearst's Department, was a stronger man than most of his colleagues, but was too friendly with the forest interests. He also held the portfolio of Education, and the pressure of running two Departments kept him from exercising full control over Lands, Forests and Mines. When Aubrey White died in 1915, Ferguson was deprived of the capable, powerful administrator so essential to the smooth running of the Department.²⁷ White's successor was a very different type of man. Albert Grigg was known to all as upright and honest but, as the Latchford-Riddell timber inquiry of 1920 discovered, he was unable to act as an operative deputy minister. Instead he became little more than a clerk, while Ferguson's private secretary, Hele, performed most of the Deputy's functions. Grigg became a somewhat pathetic figure, ignored by the Minister and his secretary, aware of the maladministration around him, but impotent to influence it. In the absence of a responsible, powerful administrator the lumbermen, bent on furthering their own interests and on intimate social and political terms with both Ferguson and Hearst, made a mockery of the timber regulations.²⁸

The disintegration of control began in the Rainy River district, where the anarchy of the timber boom destroyed Aubrey White's organization. Since 1900 exports of pulpwood had been forbidden, but American mill owners badly needed supplies and soon found ways to circumvent the regulations. They were assisted by a group of men referred to as the "old Tory Timber Ring," experienced in bending or ignoring the regulations.²⁹

Although public tenders were required for sales of all timber berths, permits could still be obtained for railway ties, pilings, posts, poles and even sawlogs and pulpwood. Originally intended to help railway contractors and mining companies obtain cheap construction timber, the system got out of hand during the railway building period of 1904-1913, when over thirty two and one half million ties were cut on permits that were "obtained by high-pressure lobbying – in other words by patronage."³⁰ Again, an operator might evaluate a particularly desirable area, and bring pressure to bear upon the Minister to offer it for public sale. By making sure that the time between the announcement of the sale and the closing of tenders

would be too short for his competitors to work out an effective estimate, the operator who sparked the sale would confidently submit the best bid, and obtain a license. A third method was to submit a tender that offered the prevailing rate for the desired species but set exorbitant prices on species that would not be cut. The tender looked good on paper, the bid would be the highest, and the license would be let.³¹ As a result of such stratagems great quantities of Ontario cordwood were shipped to American mills, despite the prohibition on pulpwood exports. In 1913, in an attempt to lower the prices of newsprint, the American publishers' lobby had managed to have the tariff on pulpwood, pulp and paper eliminated. This made it feasible for American interests to build mills in Canada and manufacture raw forest materials into groundwood or sulphite pulp or paper, as they chose, and some did so. But mills are expensive to build and it was found easier to import the wood and manufacture it in the already existing American mills. The high prices for pulpwood offered on the American market tempted timber operators to use whatever means they could to satisfy the demand. The benefits that should have accrued to the Ontario pulp and paper industry were postponed until the 1920's by the avarice of the exporters and the compliance of the Government.

Four men — Colonel J. A. Little, General Don Hogarth, W. H. Russell and J. J. Carrick — built up an empire of influence that was exposed by the 1920 enquiry. Their main interests lay in mining, but they were as willing to make money out of trees as out of ore. It is estimated that Russell's companies exported more than seventy five thousand dollars, worth of four-foot wood annually between 1914 and 1920. The wood could be obtained by buying up the returned soldiers' land grants, by settling patented lands and stripping them of pulpwood, and by outright trespass. In the Timber Enquiry of 1920 Russell was discovered to "have trespassed for many years upon Government lands without a shadow of right and . . . removed therefrom much pulpwood of great value." But the most effective method of obtaining wood was to stake a mining claim, which at the time gave the claimant the rights to all timber except pine over an area of ten square miles. Little, Russell, Hogarth and others registered claims, or arranged for other people to stake claims for them, and then removed the wood, which was not subject to the manufacturing conditions since it had not been removed from Crown

land.³² At the Latchford-Riddell Enquiry of 1920 the Crown lawyer, R. T. Harding, produced a long list of mining claims registered in either Russell's name or the names of his employees and friends. Justice Latchford asked Russell, "What mining was done on these claims?"

Harding: "Mining for pulpwood."

Latchford: "But for minerals?"

Russell replied that some assessment work had been done on each of the claims. But the judge demanded, "What mining was done?"

"I don't think there was any done."

"None whatever?"

Justice Riddell then asked the witness if any mining was intended, and received the reply, "No, sir."

Harding charged that Russell deliberately went into certain choice timber stands, picked the best pulpwood and then located the area for mining. Russell sat silent before the accusation. Riddell ordered, "Answer, Mr. Russell."

"Yes."

"Then mining was the merest pretext in order to get pulpwood, that is so, is it not?"

"Well, practically so, yes sir."³³

The Mining Act was amended to halt this type of exploitation.

High prices and the highly competitive nature of the lumber business also placed a premium on the registering of dishonest returns. The Crown Timber Regulations of 1914 stated that each camp should keep a record book, supplied by the Department "and shall cause to be entered in such book each day the number of logs or pieces of timber cut, skidded or hauled in the camp." This "shanty book" was to be kept up to date ready for inspection and, at the year's end, handed over to the Crown Timber agent along with the sworn return of the Department culler and the final company return. The 1920 inquiry found that dishonesty among the cullers or scalers was widespread, and that although paid and appointed by the Department, the cullers were usually recommended by lumbermen who, in many cases, employed them during the summer. Since 1906 there had been no inspection of cullers' returns, and it was understandable that these returns supported the claims of the lumbermen. Although the shanty books would have provided the necessary check, the Crown Timber agents usually accepted the

word of the lumbermen and cullers. When questioned about this procedure, Albert Grigg agreed that the Government was not properly protected from such fraud but protested that: "You have to depend upon your field staff, that is your Crown Timber agents largely, for the proper working out of the field work." Comparing the lump sum bonus system with the bonus bid on the thousand board feet basis, by which dues ran in the neighbourhood of two dollars, but bonus could run as high as twenty two dollars per thousand, Mr. Justice Riddell asked Grigg if, in his opinion, there was a greater inducement under the new system to make the return smaller. Grigg replied, "Absolutely."³⁴ The Shevlin Clarke Company, George Farlinger and the Spanish River Lumber Company were singled out for criminal proceedings. Testimony revealed that cullers who could not count had been appointed, timber had been skidded from expensive licence areas to cheaper territory and some lumber mills had achieved incredible overruns. The Doyle Rule had since 1879 been the standard formula for measuring "merchantable" content of the log. It was supposed to be fairly accurate for large — diameter logs, but smaller diameters were now being cut, and the Doyle Rule proved inadequate. As a result the inquiry found that in the new efficient mills the amount sawn in excess of the returns upon which dues and bonus were based was in many cases outrageous. A normal overrun was considered to be in the region of thirty to sixty per cent, but Shevlin Clark at Fort Frances had a two hundred and twenty one per cent overrun, and the Spanish River Lumber Company overran one hundred and thirty seven per cent through dishonest scaling procedures.³⁵

The Timber Commissioners not only found the Conservative administration guilty of lax procedures in connection with the export of pulpwood, and of ineffective control of the field staff, but also uncovered irregularities in the conduct of timber sales. In 1919 the Minister disposed of one thousand and sixty seven square miles of timber without competition; in 1918, one hundred and seventy one square miles and in 1917 three hundred and twenty two square miles. The Commissioners discovered that nine hundred and sixty two square miles had been sold during September and October, 1919, and asked Grigg why the Minister "was in such a rush on October 4th, 1919," when he disposed of four hundred and forty square miles to W. E. Bigwood and G. E. Farlinger. The Deputy Minister did not

know, and Riddell suggested for him that perhaps it was because the election was to take place on October 20th. It was not just coincidental that large sales often occurred just before an election, when the political party was in need of campaign funds. The Commissioners concluded that:

No officer, Minister or otherwise, should have the power to grant rights over large areas of the public domain at will without regard to Regulation; that power was never contemplated by the statutes; it does not at present exist, and should not be given to any individual. Such an arbitrary power, subject to no control, is obviously open to abuse.³⁶

The Commission of Enquiry that brought this administrative shambles to light was itself the product of a campaign in which timber policy played a prominent part. The United Farmers' party had grown out of a 1918 march on Ottawa organized to protest against the Union Government's cancellation of its promise to exempt farmers' sons from conscription. After the march there was "a great flare for a Farmers' Party, and while it wasn't a provincial question, they began to put candidates in the field." Faced with this grass roots pressure, W. C. Good, Manning Doherty, and Charles Drury got together "and knocked up a platform"; and though they had no election funds managed to win forty-three seats in the 1919 general election. A coalition between Drury's Farmers and twelve Labour members gave the new Government fifty-five seats, the exact number of the combined Conservative and Liberal oppositions.

Drury had promised to clean up the Department of Lands, Forests and Mines; and soon after assuming office he retained R. T. Harding as Counsel to gather evidence, and appointed two Liberal Judges, William Renwick Riddell and Francis Robert Latchford to preside over the inquiry. The hearings began April 12th, 1920, and concluded January 27th, 1922, after some eighty six days of testimony. The Farmers' administration wanted "to get material that would put (Ferguson) out of business permanently."³⁷ But key items of evidence could not be obtained and the United Farmers had their righteous position compromised by the duplicity of Harding and their own timber dealings. Instead of putting Ferguson out of business, the Timber Commission and his manipulation of it turned out to be one of the major factors in Ferguson's election to the Con-

servative Party leadership, and subsequently, to the Premiership.

This process began when Harding's assistant, J. M. McEvoy, was asked to resign. Apparently he wanted a complete investigation while Harding, for reasons that became public later, was interested in only a few companies. Then on the eve of the Conservative Party's leadership convention the Liberal leader, Hartley Dewart, visited Mr. Justice Riddell with the unsuccessful candidate for the Rainy River constituency, E. J. Callahan. Callahan alleged that he had retained Harding privately, before the timber probe, to gather evidence against Shevlin Clark for that company's rival, E. W. Backus.

Two days later, December 3rd, 1920, R. T. Harding resigned, although it was months before the full story came out. In March 1921, Harding told the Public Accounts Committee that the idea of a Timber Commission dated from his receipt of a retainer from Callahan, to gather evidence against Shevlin Clark, and that Mr. Justice Riddell owed his appointment to Harding's influence with Drury. Of the seventy thousand dollars spent on the inquiry, about thirty five thousand had been spent on stump and top measurements conducted on the Shevlin Clark limits presumably, according to the *Mail and Empire*, "to secure at the expense of the Province data that Mr. Harding was privately retained to gather."³⁸ In a short time, the investigation and the circumstances it had been set up to investigate were being condemned equally by the public. This pleased the lumbermen, who had felt "that the Government was endeavouring to drag the modern and well-equipped sawmills which waste nothing but the knot holes, down to the level of the old style mills that had not the machinery to salvage odd bits of timber and convert them into laths or boxwood."³⁹ The mining industry, continued the article in the *Mail and Empire*, "is quietly smiling over the setback of the Drury Government; for mining men remember and resent keenly the Premier's implication some months ago when he said that after he had investigated the 'crooks and grafters' in the lumber business, the mining industry was 'next'." The Farmers missed their opportunity and what had begun as a highly organized investigation became an embarrassment that contributed to their eventual defeat.

Many had expected that the inquiry would destroy Howard Ferguson's political career. But Ferguson appeared before it armed with

careless statements made by the Commissioners and Harding. He vigorously defended the tender system of bidding and the bonus-per-thousand-board-feet basis of sale; he considered it trivial that out of five years' correspondence a few letters were missing from the files and turned on the Crown Counsel and Commissioners. "If this matter were being laid before a Jury," he charged, "I would certainly feel that I should challenge your Lordships' qualifications as jurors." He reviewed the political careers of the judges and pointed out their long associations with the Liberal Party. The Commissioners were tricked into self-defense and Ferguson turned on Harding, the Crown Counsel: "I say that the conduct of the Crown Counsel from the beginning leaves in the mind of nobody any doubt as to what his purpose and attitude was. And knowing, as I do, that amongst the men who instructed him the declaration has been made that, 'We are going to get Ferguson,' he who has been carrying out his duty to the letter . . . but he is going to fail in getting Ferguson, because Ferguson has done nothing that won't stand the light of day and upon which he won't be delighted to have you turn on the spotlight and search it to the bottom." When he left the stand, Ferguson's brilliant defence of himself had forced on the Commissioners the obligation of explaining their own positions.⁴⁰ His vindication was complete when, the day after he promised the Conservative convention to "take the hide off Harding",⁴¹ Harding resigned under scandalous circumstances. Ferguson told the inquiry that, "the great Jury of the Public is the one that has to deal with these questions, and I will be quite prepared to submit my case to the public."⁴² Thus though Latchford and Riddell found him guilty of disregarding the regulations, taking arbitrary measures, and permitting scandalous patronage and lax administration,⁴³ he was acquitted by the "great Jury of the Public" and elected the ninth Prime Minister of Ontario on July 16th, 1923.

Meanwhile, overshadowed by the prosperity of the lumbermen, the pulp and paper business had been making some quiet gains and after 1920 the spotlight shifted to that industry. The most important feature of the development was that the industry was losing its speculative overtones and passing into an era of construction and production – in fact, over-production. This change was largely due to the elimination of the United States tariff on newsprint and pulp in 1913; and an increased American demand for these products

soon made possible profitable American investment in Ontario mills. George H. Mead, a timber capitalist from Dayton, Ohio, and E. W. Backus were the first to seize the opportunity. Between 1911 and 1913, Mead took over the Sault Ste. Marie Pulp and Paper Company, the Sturgeon Falls mill and the Spanish River plant and consolidated them into the Lake Superior Pulp and Paper Company and the Spanish River Pulp and Paper Company. Backus established a mill on the Canadian side of the International Falls which by 1914 was supplying ground wood-pulp to his sulphite plant on the other side. Two other American lumbermen took over the saw-mill at Dryden in 1910, and began building a pulp mill. F. H. Anson, a Canadian promoter, acquired the Abitibi pulp limit in 1912 on the understanding that he would build a mill at Iroquois Falls. Like most of the mills that were promised, this was largely financed on its future earnings.⁴⁴

The Conservative Government moved very cautiously, giving most promoters only lukewarm encouragement and occasionally, as in the case of the proposed *Chicago-Tribune* mill at Thorold, openly discouraging investment.⁴⁵ Not until 1916 did the Department begin to warm to the possibilities of the industry, when once again pulp



Pulpwood booms at Port Arthur, 1951

and paper received a separate section in the Annual Report. Then the Minister observed that "the unprecedented demand for paper continues to raise prices," and that the American pulpwood supply was nearly exhausted. As a consequence, constant enquiries reached the Department about Ontario's pulpwood lands. Various local interests attempted to attract mills to their region; and it was in response to encouragement of this sort that the Port Arthur Pulp and Paper Company in 1917 undertook to build a mill at the Lakehead. To supply this mill the Department opened two large pulp limits on the North Shore; but the successful tenderers turned out to be J. J. Carrick and Samuel Marks, who obtained the concessions for a small deposit. Thus two timber speculators with no previous pulp experience held vast tracts of spruce timber with no pulp mill to supply, while a paper mill under construction at the Lakehead held no timber limits of its own. The mill had to be found another limit. The public auction was held once again, but a very brief bidding period restricted the competition and the mill acquired a concession in the Nipigon region.⁴⁶ The incident was an example of the speculators' activity. Assured of preferential treatment in the bidding and of tolerance while their properties and paper promises awaited an interested party, these timber speculators procured extensive concessions from the Crown lands and held them until time and demand raised their value.

It was through speculators that Kimberly-Clark came to establish its Spruce Falls operation at Kapuskasing. The limit had originally been bought in 1917 by two American speculators who a year later succeeded in re-selling it to the Wisconsin firm.⁴⁷ The responsibility for developing the remote concession fell to F. J. Sensenbrenner. After buying up most of the property and equipment at the defunct Kapuskasing Colony, a beginning was made on a mill, which however burned down while still under construction in 1921. The experience of the Spruce Falls Company during its early years was typical of that of most of the pulp and paper companies. Tight money and uncertain markets dictated that they proceed at the minimum pace required by the agreements, and if possible, more slowly. Officials had to be mollified in order to gain extensions of the time limit and tolerance in the payment of dues. Even the smallest detail was pursued in the interest of friendly relations between the Company and the Government. When the *Saturday Evening Post*

cancelled its Canadian distribution, much to Premier Drury's private displeasure, Sensenbrenner saw to it that the six back issues the Premier missed were promptly on his desk and that until further notice, current issues were forwarded to him immediately. After such pleasantries, letters regretting that "present and prospective conditions in the pulp market are still unfavorable . . . we would not be warranted in going ahead at present" came a little easier.⁴⁸

However, when it came to charming governments, E. W. Backus was the master. The timber baron from Minneapolis "was able to use politicians irrespective of their party labels; he believed that every politician had his price and he was reported to be generous at election time."⁴⁹ At one point in his career, Backus was president of thirteen corporations, including four pulp mills in Ontario, and holder of six pulp concessions. He built railways to supply his mills and market his paper, and invented a new material, 'insulite', to use up the waste from his sawmill and pulp plant. When Backus moved into an area he brought his own real estate firm, telephone, hydro and finance companies. International Falls, Fort Frances, Kenora and to a certain extent Fort William were in a very real way his towns in the 'twenties. But his immense empire, like so many others of the time, was financed on its future earnings. And with the installation of each new newsprint machine, the price of paper was being driven down.

The concessions extended to Backus by the United Farmers' Government proved a continual source of embarrassment to an administration that had come to power on an anti-business "clean up" campaign. In 1914 Backus had been granted the Lake of the Woods pulp concession, but the War and financial stringency prevented his developing the promised mill at Kenora. After taking office in 1919 the United Farmers forced Backus to agree to go ahead. But the next year he complained that the limit did not contain enough timber for his purposes and asked for the English River limit as well. According to Conservative propaganda, the English River concession and the hydro rights to the White Dog Rapids were signed over to Backus at a secret meeting in Attorney-General Raney's office September 30th, 1920. Raney answered these charges defensively, pointing out that the limits had passed through the hands of several speculators and that when Backus, a serious investor, had threatened to pull out entirely unless

he could get more wood and water power, the Government had felt obliged to meet his demands. An agreement on water power had been signed in Raney's office, but a private agreement on the pulp limit had been refused. The Government duly announced that it would receive bids on the English River limit; and when the results were made public, in January 1921, Backus was found to have bid highest and received the limit. But, though the regulations had been observed, the United Farmers were unable to shake off the public suspicion aroused by the incident; and when definite irregularities in the sale of saw-log limits were revealed in 1921, their righteous, reforming posture could hardly be taken seriously.⁵⁰

It was a sad end to an administration that had held so much promise for reforming foresters. To them the early days of the Drury administration were exciting times, when a number of professional foresters were hired by the Department and there seemed hope of putting into practice some of the lessons learned at Forestry School. Industry had not been as enthusiastic; it had every reason to suspect individuals who slighted its honesty and probed into its most intimate affairs.⁵¹ Yet under the United Farmers' administration the regulation of Crown timber had been rescued from the state of chronic anarchy that existed before they had come to power. They had appointed a new Deputy Minister, Walter C. Cain, to restore and improve Aubrey White's system. In 1923 Cain had appointed Major Hartt as Inspector of Crown Timber Agencies to guarantee the independence and competence of the field operation upon which the system relied so heavily.⁵² The administration of the Department, which the former Deputy Minister had confessed would have disgraced a country store, was quickly returned to a business-like footing.⁵³ However, the United Farmers reaped little benefit; they passed from power troubled with their own scandals, split internally and destitute of election funds. In 1923 the Conservatives, purged for the moment of the overt power of the "Timber Ring" and led by Ferguson, once again assumed office.

Howard Ferguson was a very popular Premier, particularly among the lumbermen, who found his sharp wit and keen political instinct much more to their taste than the righteous suspicions of the United Farmers. His popularity was no doubt enhanced by the fact that his first year in office coincided with the largest cut since the wartime high of 1915. New pulp mills were under construction at Kenora

(Backus) and Kapuskasing (Sensenbrenner); and a renewal agreement was signed with Abitibi Power and Paper Company granting it more than three thousand square miles "to ensure continuous operation and the employment of a large number of workmen."⁵⁴ Ferguson's encouragement of the often troubled pulp and paper industry and the faith in development and industrial expansion that was central to his policy promoted compatibility between government and industry.

The Department was now back on its feet and at first the new administration made few changes. The Mills Licensing Act⁵⁵ was passed in 1924 and the same year a minor improvement was incorporated in the method of timber sales and the upset price was reintroduced. Previously, the Annual Report explained, "bidders were given the situation of an area involved and requested to make bids without regard to what the Crown considered a fair stumpage value." Those interested cruised the area, estimated its value and tendered a bid for it. Where competition was limited the bids were often not much higher than the timber dues and, "while the Crown could decline to accept any tender, the general practice was to deal fairly with the highest bidder and accept his tender if within a reasonable measure of what the Crown privately held to be fair." The new method of sale eliminated the guesswork on the part of prospective purchasers. In the terms and conditions of future sales, the Crown estimate of various classes and quantities would be included, as well as "a fair upset price beyond which tenders are asked to bid." Such a practice reduced the time necessary to conduct a sale and at the same time assured the Crown a reasonable price.⁵⁶

The spirit of the negotiations between the Spruce Falls Pulp and Paper Company and the Government offers a fair indication of the atmosphere in which the industry and Government carried on their business in the 1920's. The companies wanted more limits, ostensibly for production reasons, but really for financial arrangements. With their newly acquired power and timber rights they agreed to expand production and employment. The Government realized that the exact letter of each agreement would not be carried out, and did not interfere when the companies ran into short-term financial problems while they awaited the long-run success. At the end of the United Farmers' term, the Spruce Falls Company had received the power rights to Smokey Falls and in return obligated itself to "build

mills ultimately with a capacity of five hundred and fifty tons of newsprint paper daily." The two parties agreed at the time that the larger mill would require more extensive limits and, as the Farmers' Minister later wrote, "except for the change in government, the understanding would have been carried out."⁵⁷ F. J. Sensenbrenner persuaded the Conservatives that "our present obligations for pulp and paper mills at Kapuskasing with a capacity of five hundred and fifty tons per day, make it essential that our timber resources should be larger." He was frequently in touch with both the Premier and the Minister throughout the two years of negotiations, explaining that "we have carried the enterprise absolutely at our own expense through the lean period consequent to the war; but the time has now arrived, when, in order to provide additional capital, further financial arrangements will require to be made; and it is essential to our interests that we should be in a position to show that we have the production of five hundred and fifty tons of paper per day . . . Following my interview with you today I saw the Prime Minister and have no doubt that he appreciates the situation as I have set it out to you, and he informed me that he would take the earliest opportunity of conferring with you; and I hope your and his engagements will permit of speedy action."⁵⁸

Sensenbrenner in his private interviews must have made it known that Spruce Falls was negotiating with the *New York Times* interests, and that on the successful completion of these negotiations, the company would have no difficulty whatsoever in marketing its product. After the *New York Times* bought a 49% interest in Spruce Falls during 1926, the Kapuskasing mill was assured of a steady market and later became one of the most successful operations in the Ontario forest.⁵⁹

Ferguson was aware that he was taking risks in extending agreements on the basis of promises. When Strachan Johnston, Sensenbrenner's lawyer, indicated that fear of the Government's demanding strict adherence to the letter of the agreements was discouraging investment in Spruce Falls shares, Ferguson reassured him. He admitted that "the Crown has always retained . . . power by which it might promptly and effectively protect itself," but declared that he knew of "no case in which it has ever been invoked for the purpose of determining any contract." "What the Crown expects," he continued, "is a reasonable compliance with the covenants and

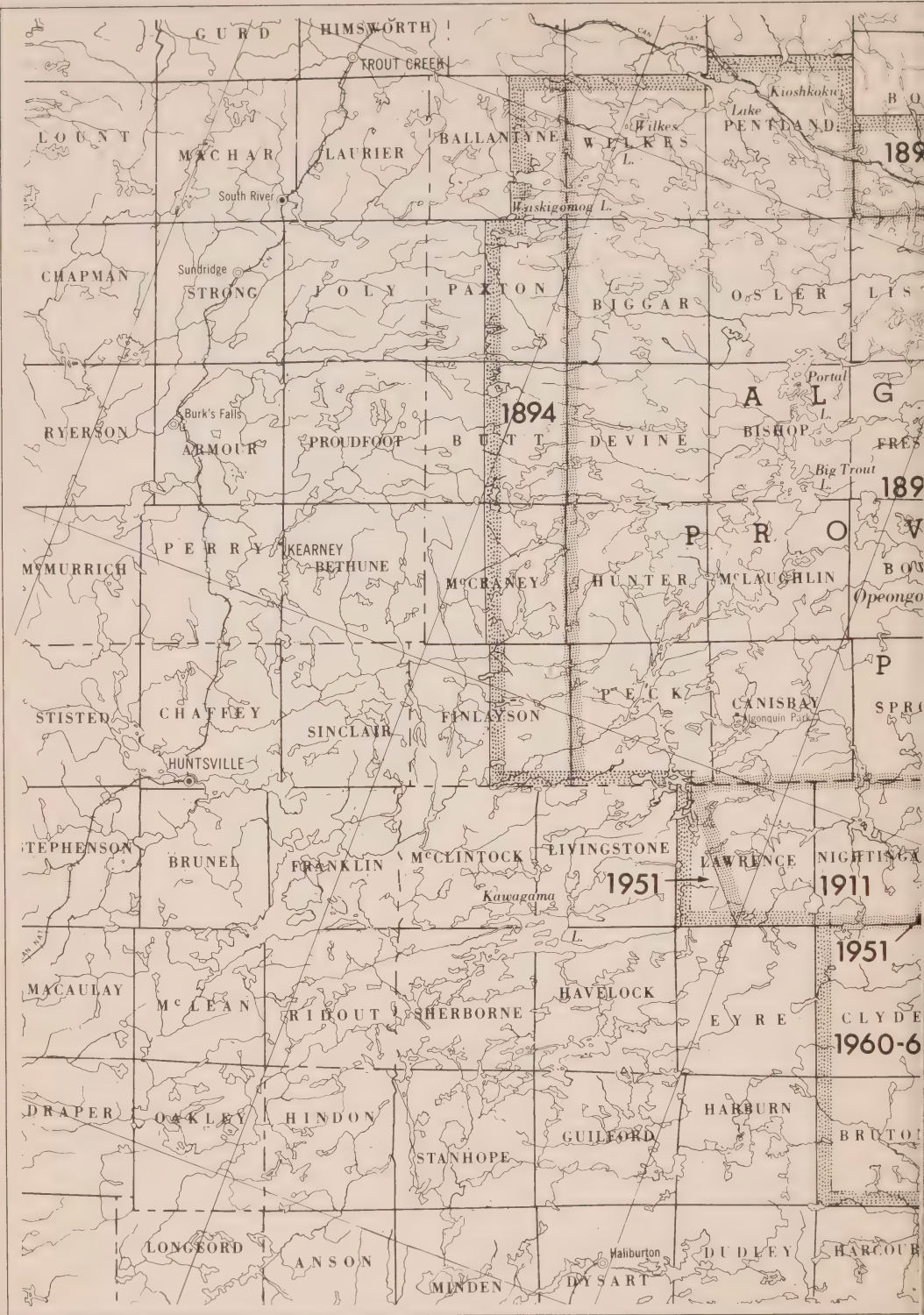
obligations; and it is always ready and willing to give consideration to difficulties that may arise to prevent the strict observance of the letter of the Contract . . . We are in a way the latest shareholders (in your company), because we contributed the power and timber at a very reasonable price, that will undoubtedly enable your organization to flourish.”⁶⁰

The same spirit prevailed as agreements were signed that enabled the Thunder Bay Company, Nipigon Corporation, Provincial Paper, Fort William Paper and Great Lakes Paper to divide among themselves “practically the entire forest resources of the Lake Superior Region.”⁶¹ By 1928 there were eight pulp mills operating in the northwest and five more between the Soo and Iroquois Falls in the central regions; and in the south Ontario Paper continued to produce for its closed Chicago market, though it still held no limits in Ontario. The industry in Ontario had passed from the era of speculation into the era of production. The mills spun thousands of tons of paper onto the market daily. The cut climbed steadily from just over two hundred and fifty thousand cords in 1922 to seven hundred and fifty thousand in 1927.⁶² However, although pulp and paper stocks were often a good speculative investment, the actual operation of the companies was another matter entirely. With each new pulp company peddling its wares on the open market, the price of newsprint was driven down from \$79.30 in 1924 to \$70.00 in 1927. It fell to \$62.00 in 1929 and by 1934 stood at \$40.00 a ton.⁶³ The expansion of the 1920’s had been carried out with little regard to the market and had been financed on timber limit collateral and the promise of future earnings. The resultant over-production made a complete collapse almost inevitable.

ALGONQUIN, QUETICO, RONDEAU AND OTHER PARKS



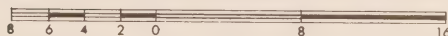
When Algonquin Park was created in 1893, the Legislature stated that it was intended to serve “as a public park and forest reservation, fish and game preserve, health resort and pleasure ground for the benefit, advantage and enjoyment of the people of the Province.”¹ More precisely, the Park was to have two purposes, conservation and recreation. The history of the past seventy-five years of Ontario’s provincial parks has shown that the second of these purposes is the more important. But the founders of Algonquin Park – Kirkwood, Dickson and their contemporaries – saw the matter in a different light. Their prime concern was to save the water, forest and wildlife resources of the area from destruction; and recreation was only secondary. If in the course of accomplishing con-





MAP
SHOWING ORIGINAL AREA OF THE
ALGONQUIN
PROVINCIAL PARK
AND SUBSEQUENT ADDITIONS
MADE SINCE 1893

SCALE



MILES

servation, a playground could be provided, so much the better. But Kirkwood's conception of the Park as a health or holiday resort was limited to what he knew of British and European practices; for instance, to the building of a few hotels like those in the Forest of Dean in Gloucestershire or in the New Forest in Hampshire.² Holidaying in the wider sense that we know it today, was not part of his vision; and indeed it could not become significant until after the Second World War, when improved means of communication, increased spending power and greater leisure were to make recreation into a major industry, rather than a by-product of conservation.

Algonquin Park was, in the 1890's, remote, inaccessible and almost uninhabited, except by lumbermen, trappers, hunters and Indians. In the words of Thomas Gibson, the Park's first secretary, "no railway penetrated it, or even approached its borders; no travelled highway passed through it, or even led to it . . . There was not . . . a cross-roads hamlet within its boundaries; not a post-office, church or schoolhouse; even the ubiquitous squatter . . . has found this district too distant from markets and supplies, and is represented by but one or two of the hardiest of his kind. Here is one of the largest tracts of untouched forest now left within the limits of Ontario untouched, that is, for settlement purposes; for even here the lumberman has been long at work . . . This vast, solitary, aromatic wilderness is as yet almost as little known as if it were in Labrador or on the Hudson Bay slope."³

Lumbermen in general approved of the Park, expecting that it would keep out settlers and protect the headwaters of the streams down which they floated their logs. They did not favour the development of roads and railways through it. In fact J. R. Booth, the lumber king, urged that the southern boundary of the Park should be redrawn to keep it clear of the railway he was building, the Ottawa, Arnprior and Parry Sound Railway. Other people at this time agreed with him that improved communications would only make it more difficult for the park rangers to keep out trespassers and suppress poachers. For several years, in fact, more attention was paid to keeping unwanted people out than to encouraging the general public to visit the Park. First, the boundaries had to be surveyed and carefully marked. Next, certain families of squatters found inside the Park had to be persuaded to move elsewhere. Then the ranger staff had to take up patrol duties for fire-prevention

purposes; and later to carry on a campaign to eliminate the rings of illicit fur-traders and poachers that were preying on the wildlife. At the same time they were encouraged to trap wolves by the application of a bounty system. The first Superintendent of the Park, Peter Thompson, died soon after its opening. Thereafter it passed through a phase of uncertainty for several years, until George Bartlett was appointed to take charge in 1898. Four years later he made his first canoe trip right across the Park from north to south, clearing and marking all the portages as he crossed them. As early as 1886 James Dickson had written a book, *Camping in the Muskoka Region*, to popularize the canoeing, fishing and camping glories of the region.⁴ But he was ahead of his time. It was not until 1912, when Joseph Adams published his *Ten Thousand Miles Through Canada* that "the trip to Algonquin Park" became fashionable with the younger generation.⁵ Even then, down to World War I the attractions of Algonquin Park were chiefly enjoyed by American visitors and a few eccentric artists and nature-lovers from Toronto.

Meanwhile at the southern end of the Province, a park of quite a different character had been established. This was Rondeau Park, created in 1894 (only one year after Algonquin) on a peninsula on the north coast of Lake Erie at famous Rondeau Harbour. The whole of the land area here is composed of sand, on which pines flourish – hence the park's other name of "Pointe Aux Pins". Incidentally, Rondeau was one of the few areas in southwestern Ontario which still preserved its original forest cover intact; perhaps because since 1876 a caretaker had been made responsible for the protection of the trees.⁶ Rondeau is the best example of the Carolinian forest in Ontario. Many species of trees usually found further south grow there, including tulip, black walnut, butternut, sycamore, oak of various species, maple and basswood. Deer (brought in from Algonquin) have found the locality to their liking and have increased in number. The Park has also long been recognized to be one of the best places in the Province to watch migrating birds, of which two hundred and seventy four species have been identified and seventy nine found to nest.⁷ The large marsh area contains many interesting species of plants and colonies of water-fowl.

The climate of Rondeau is moister than that of drier Algonquin, and the winters less crisp and cold. From 1884 onward it became



Selling Souvenirs in Rondeau Park, 1899



SHEVLIN-CLARKE logging dam at Pickerel Lake, 1939

a popular picnic area, especially on Dominion Day; also it was frequented by duck hunters during the shooting season. In 1893 twenty acres of the land were leased for the building of an hotel and the accommodation of visitors on the point. This led to a popular demand for the protection of the whole area and in 1894 the town of Chatham petitioned the Legislature to create Rondeau a provincial park.⁸ The Act to carry out this request received the Royal Assent on May 5th, 1894. It was similar to the Algonquin Park Act, both in its dedication and its provisions regarding leasing of the land and cutting of the timber;⁹ but the provisions against hunting were, in the following year, assimilated to those of the Ontario Game Protection Act of April, 1895.¹⁰

Algonquin and Rondeau Parks were contrasting prototypes of the Ontario parks to come: Algonquin largely a wilderness, a haven for the canoeist and the lover of solitude; Rondeau comparatively small, close to population, a place to visit for a day or weekend, or for spending the summer in a cottage, but always in company. Its wilderness was 'managed' by man; its game largely exotic and imported for display. The nature of each park was, in short, dictated by the area in which it was located.

During the next forty years four more parks were created, three of which, after 1938, were handed over to the Department of Lands and Forests to administer. Two of these parks were Long Point (four hundred and twenty acres) on Lake Erie and Presqu'île on Lake Ontario – both favoured stopping-places for migrating waterfowl, shore and marsh birds during the spring and fall. Both parks, before being transferred to the Department in 1956, were for many years managed by special commissions. The Acts which created Long Point in 1921 and Presqu'île in 1922 were almost identical with the Act of 1907¹¹ which had created Burlington Beach Park near Hamilton; no doubt because the character of all three was similar. In Algonquin and Rondeau Parks, most of the land had been owned by the Crown from the start; but not so with Burlington Beach, Long Point and Presqu'île. These three had long been recreational areas where much of the land had been leased or sold in lots to cottagers, and roads built. The Government of the Province was prepared to perform the useful and necessary task of administering them; but, since buying back the leased and sold land would have been prohibitively costly, it could not hope to manage these

parks on the same lines as Algonquin, i.e. through a superintendent. Hence the adoption of the commission method, first for Burlington Beach and afterwards for the other two. The Acts provided for the appointment of commissions with powers like those of a municipality. This type of government seemed appropriate for areas with large permanent and transient (summer) populations.¹²

The fourth provincial park, Ipperwash Beach, one hundred and two acres along the south-east shore of Lake Huron, was created by Order in Council in 1938, after having been the subject of repeated public representations, dating back to 1932.¹³ Like Rondeau, Ipperwash Park had long been a popular area for picnicking and swimming, and was badly in need of conservation and administration for the public good.

Quetico Park, proclaimed a provincial park in 1913, is a specially interesting case because it involved international pressures. Quetico forms part of the Rainy Lake watershed, an area about one hundred and eighty miles long and one hundred and twenty miles broad, which lies partly in Ontario and partly in the American state of Minnesota, just west of the Great Lakes. The district has been described as "one of the few parts of North America which remain almost as they were before the coming of the white man."¹⁴ It is a heavily forested region, peopled in 1913 largely by Ojibway Indians who still practised their primitive arts*, lived mainly by hunting, fishing and trapping and adhered to their traditional tribal religion. The area was steeped in history, having long been a water highway for travellers and explorers, such as La Verendrye, Alexander Henry and David Thompson. It had little economic value, apart from a few scattered mines; and it was particularly rich in wildlife. It was the increasing destruction of this wildlife, especially the moose, that brought about the original reservation of Quetico's seventeen hundred and ninety five square miles as a "wilderness" area in 1909.¹⁵ Two men, the influential M.P.P. for Rainy River, W. A. Preston, and the Minnesota State Forestry Commissioner, General C. C. Andrews, had long been claiming that Quetico was the last great reservoir of moose left on the North American Continent.¹⁶ Then, in 1908, Arthur Hawkes, the publicity agent for the Canadian Northern Railway, went to St. Paul and pledged himself that, if

*Some of the rocks in the area are adorned by coloured pictographs done by unknown Indian painters.

the United States and the State of Minnesota would cooperate by creating a game and forest reserve on their side of the border, Ontario would do the same.¹⁷ His promise was endorsed by Deputy Minister Aubrey White, who at the same time recorded his concern for the large stands of pine still remaining in the area.¹⁸ Accordingly by Order in Council on April 1st, 1909, Quetico was declared a forest reserve; and four years later (November 7th, 1913) the reserve was created a provincial park. Protection of game was stated, in the Annual Report, to be the chief objective of the park.¹⁹

Sibley and Lake Superior Provincial Parks were both created in 1944. Sibley, across Thunder Bay from Port Arthur and Fort William, was only sixty three square miles in size but lay in country of rugged beauty, embracing the famous Sleeping Giant Rock whose hard cap is some five hundred million years old, yet is much younger than the rock along the west shore of the park, which is one billion years old. Sibley had been a forest reserve since 1900, and a popular hunting ground for local people. From 1936 onwards the Chambers of Commerce of Port Arthur and Fort William kept up an agitation to create Sibley a park²⁰ – a campaign stimulated by certain remarks of Prime Minister Mackenzie King on the value of work on national parks as a means of reducing unemployment. Negotiations were therefore begun between local people, who hoped to receive relief grants for park development, and the Dominion Government in the person of the Hon. C. D. Howe.²¹ Business interests anticipated also that the park would afford chances to provide facilities for American tourists from Minnesota. Among the park's attractions were its flora and fauna – birds (such as the red-headed woodpecker) and plants rarely found so far north. The Ontario Government, however, though aware of these pressures, did little to develop the park for many years after its establishment; it intended only to preserve the area against the time when the Trans-Canada Highway would be built. Lake Superior Park, on the northeast shore of Lake Superior, west of Sault Ste. Marie, also came into being in 1944. Its area of five hundred and forty square miles is rich in scenic beauty – rocky and sandy shores, cliffs, lakes and rivers – enhanced by its colourful gneiss rock, which appears to change hues with variations in light conditions. It was set up under strong pressure from Sault Ste. Marie at a time when Highway 17 was pushing north from the Sault and had reached Agwa Bay, just inside the southern end of

the proposed park.²² But again the Department, after constituting the area as a park, did not plan serious improvements there until the highway had been extended right through the park.

We have already pointed out that, in the first forty years after the establishment of Algonquin and Rondeau, only four new parks were created and administered by the Ontario Government. Even Algonquin and Rondeau, for a three-year period from 1896-1898, were placed under the care, not of the Crown Lands Department, but of the Attorney-General;²³ perhaps this was due to personal reasons, since the then Attorney-General, Sir John Gibson, had lately been Commissioner of Crown Lands. Later on, from 1913 to 1920 Rondeau Park similarly became a responsibility of the Department of Public Works.²⁴ All this goes to show that, at this point, the Provincial Government did not contemplate the task of administering a parks "system"; it bandied the individual parks about from one authority to another, without deciding what to do with them as a whole. Furthermore the Lands and Forests Department, regarding itself as a revenue producer, shied away from the prospect of acquiring more parks which would cost more to operate than they earned. Of course, the Government of those days did not have the financial resources that governments have now.

Parks were never actually self-sustaining, but were supposed to be. This desire accounts for the special fishing licenses issued within the provincial parks, and for the trapping schemes which were tried both in Algonquin and Quetico. The latter when first attempted raised such howls of protest among the public that they were soon discontinued.²⁵ However, from time to time the Department experimented with various rather incongruous money-making projects. In the later 'twenties and 'thirties the park rangers collected maple sap and made and sold maple syrup: the practice was discontinued in 1942. The Department also had its own telephone line, which began as a fire-fighting measure in 1915, and was slowly improved to a point where its services could be rented out to park visitors – a decided convenience to them after the opening of the highway through the park in 1936. Eventually the system was turned over to the Bell Telephone Company. This stress on revenue may also explain the tendency to create "commission" parks, which would not be a financial liability to the Lands and Forests or any other Government department.

Even at this stage (before World War II) the popular demand for recreation had not reached anything like its present-day magnitude. The great increase came after World War II, as a result of the marked growth of population, spending power and leisure time, and the rapid improvement of communications.

During this early period, one of the main areas of concern in the management of the Parks was the timber. Both the Royal Commission of 1893 and the Algonquin Park Act that followed were at pains to ensure that the rights of the timber licensees should not be impaired. At first, in fact, the creation of the Park made little or no difference to the operators. They were only interested in pine, and the Act had specified that only pine should be cut in the Park. When the demand for other kinds of timber increased, the law was amended to include those as well, e.g. the Act of 1913 allowing birch to be cut within the J. R. Booth limits in Algonquin.²⁶ In the same year, a general Provincial Parks Act was passed, incorporating the Algonquin provisions, and adding a general clause prohibiting cutting in parks except under the Crown Timber Act or under regulations made under the Parks Act.²⁷ In 1950 this Act was revised and all direct reference to cutting was left out.²⁸ Thenceforth all timber cutting in parks came under the Crown Timber Act.

Neither in Algonquin nor in Quetico did the cutters suffer any real hardship, for the Department intended from the beginning not to prevent, but merely to control, the cutting of timber. However, to protect the aesthetics of the Park, the administration prohibited (except in very special cases) all cutting of timber along lake edges and river shorelines, across portages or (in Algonquin) beside roads. Similarly, flooding in order to facilitate log driving was ordered kept to a minimum, because it killed the trees and destroyed the scenic value of the shore lines. The superintendents of Algonquin in 1894,²⁹ and of Quetico in 1914,³⁰ lodged complaints about flooding which led to the issue of departmental regulations in the latter year, giving them authority to control the water level of lakes and streams by regulating the operators' dams.³¹

Shore-line protection took longer to achieve. The Provincial Parks Act of 1927 gave the Minister the right to withdraw timber from cutting for the "purpose of watershed protection, beautification of the park, fire protection, game preserves and shelters, or any other purpose" deemed advisable.³² This provision was applied from 1930

onwards; though in Quetico, as late as 1941, a storm of public protest was required to activate the Department's suppression of attempts at cutting along Basswood Lake.³³

Rondeau Park, which was much smaller than the others, supported a handsome growth of trees, including the only pines still standing in that part of the Province. From the beginning the superintendent, Isaac Gardiner, recommended that restricted cutting of dead and dying trees be allowed in the Park.³⁴ In this way, he held, the park could be beautified and the young trees be given a chance to grow. Also, the cut lumber could be stored and used for buildings and other improvements within the park. The Government followed this policy in Rondeau for a number of years, even going so far as to authorize the setting up of a saw mill to cut the lumber. About 1908 plans were made to market the timber, but so much objection was raised that the Government abandoned its plan.³⁵

Another natural resource the development of which might have proved detrimental to the parks was minerals. The regulations made under the Parks Act did indeed allow prospecting; but none took place until 1950. Prospecting and staking were allowed in both Algonquin and Quetico, but no valuable discoveries were made.³⁶ In neither park has mining ever been a problem. In the area of Lake Superior Park considerable mining activity had previously taken place; but the Department eventually secured the exclusion of some of the patented areas from the proposed park.³⁷ Since 1956 both prospecting and mining have been prohibited in all provincial parks, except for one or two patents issued in Superior.³⁸

Preservation of wildlife was one of the main reasons for the creation of both Algonquin and Quetico Parks. In fact James Dickson, who surveyed most of the townships included in Algonquin Park, argued that "the preservation from destruction of moose, deer and beaver would, in my opinion, alone warrant the Government in making a reservation."³⁹ At that time (1893) it was obvious that the deer were losing their fight against hunters and that the beaver were being trapped out of existence.⁴⁰ Other fur bearers too, such as the fisher and the marten, were in danger of early extinction because of the high value of their pelts.

Both Algonquin and Quetico, at the time of their creation, were habitually hunted and trapped by the local people. These resented the restrictions imposed; and poaching soon became all too common.

Since pelts were much more valuable than they are now, an illegal expedition into the Park in winter, when the pelts were in their prime, was a worthwhile risk. Most of the parks were understaffed, and the rangers had large territories to patrol; they carried arms when they tramped their beats on snowshoes across the park. Many exciting stories of wild pursuit are told of those early days. For example, about 1908 the chief ranger Mark Robinson and his partner were instructed by Superintendent Bartlett to find out how furs were being smuggled out of the Park to outside buyers. After many setbacks they learned that a stranger named Black was paying frequent visits to the railway station at Rock Lake, at that time just outside the Park limits. They therefore arranged to be on the platform when Black got off there, and identified him as a fur buyer from Temiskaming. Some patient detective work on Black's further movements enabled them, a few days later, to lay hands on a fine



NOTICE.

NOTICE IS HEREBY GIVEN that the following townships in the district of Nipissing, viz., PECK, HUNTER, DEVINE, BIGGAR, WILKES, CANISBAY, McLAUGHLIN, BISHOP, OSLER, PENTLAND, SPROULE, BOWER, FRESWICK, LISTER, PRESTON, DICKSON, ANGLIN and DEACON have been set aside as a public park, forest reservation and fish and game preserve, under the name of "The Algonquin National Park of Ontario," by virtue of 56 Vic, chap. 8. The said Act strictly prohibits:

1. Carrying or using firearms or explosives within the Park, except as provided by regulations.
2. Hunting or trapping therein.
3. Fishing with net, trap, spear or night line.
4. Fishing with hook or line without license from the Commissioner of Crown Lands.
5. Mining exploration or prospecting for minerals.

The Superintendent of the Park and the Park Rangers are charged with the duty of enforcing the said Act, and are empowered to arrest and bring to trial or remove from the Park, any person found violating the same, or carrying or having in his possession any fishing nets, traps, spears or night lines, firearms or explosives, and to seize and confiscate the same.

The penalty for violating the said Act is a fine not exceeding \$100 for each offence, or in default of payment thereof, imprisonment for a term not exceeding three months.

All persons are required to govern themselves accordingly.

The co-operation of the public is invited in preserving the timber, game and natural beauty of the Park, and in carrying out the objects for which it has been established.

A. S. HARDY,

Toronto, 27th Sept., 1893.

Commissioner of Crown Lands.

Poster, 1893, announcing forest and game reservation in Algonquin Park

supply of furs from animals that could be found only in the park – mink, marten and fisher. Still they could not act, as the furs were found just outside the park, though technically within its jurisdiction. The Park Superintendent was cautious, and urged the rangers to continue their investigations. In the end, they succeeded in uncovering the whole racket centering around Black; it included a railway employee who lived near a trestle bridge half a mile from park headquarters. The railway company paid him for acting as a fire warden and for keeping the bridge in repair; but in addition he was augmenting his income by loading bales of stolen furs on passing trains.⁴¹

If the rangers could not always catch their man, they could often spoil his work. Soon they found that they could safeguard the lives of the animals by simply destroying trapping equipment which they picked up within the boundaries. As the years passed, however, and patrolling became more effective – especially after the introduction of aircraft and the decline of the market value of pelts – poaching declined in importance within the parks. Thereafter, the problem shifted to trapping outside the boundaries, especially in the Huntsville and North Bay districts. Quarrels and feuds broke out among the local people, who depended on trapping for a living and who resented the presence of “interlopers” on their ground. At last the Department was forced to intervene and establish a system of “zoned trapping” in the border areas; this involved calling together all the regular trappers, giving them a chance to set forth their claims, and finally registering each man and assigning to him his own exclusive run.⁴²

One early result of the protective activities of the park rangers was a reversal of the tendency of some of the wildlife to die out. Within a year or two of the foundation of Algonquin, it was noticed that beaver and deer were again on the increase; and by 1901, there was even a surplus of deer available for export to Rondeau Park. The deer introduced there rapidly multiplied to the point of becoming a nuisance by foraging in nearby farmers’ fields; so the Department in 1912 had to adopt the expedient of thinning them out annually.⁴³ Long before this, too, the various Superintendents of Algonquin had observed that the Park was beginning to serve as a natural breeding ground for the surrounding territory.⁴⁴ Hunters’ camps and traplines were increasingly located just outside the park

boundaries, to take advantage of this overflow of animals protected inside the park.

Now the Department began deliberately to trap some of the surplus animals alive, and ship them out to remote areas. The deer sent to Rondeau were only the first example of this; it was followed by the capture and export of beaver, marten and fisher. Before the First World War a substantial and profitable trade in surplus live beaver from both Quetico and Algonquin was developing; but after the War the United States Government imposed restrictions which discouraged its continuance. Subsequently, live trapping of beaver was confined mainly to fulfilling the needs of local re-stocking. Later, in 1956 and 1959, fisher and marten were likewise trapped for release in depleted areas around Lake Simcoe.⁴⁵

As well as preserving game, the Department planned to introduce new desirable species into the parks; but these ventures mostly ended in failure. Wapiti or elk were introduced into Algonquin Park, but seemed to disappear after a few years.⁴⁶ Wild turkeys, once native to Rondeau, were sent to Algonquin in exchange for the deer, but failed dismally in their new environment.⁴⁷ Pheasants had flourished wild in Rondeau from early times, but in 1915 the Park established an aviary, where it raised several exotic species and varieties of pheasant, setting some of them free and keeping others in cages for display to visitors.⁴⁸ On the whole, the introduction of exotic species was unsuccessful and was eventually abandoned.

Wolves and other "noxious creatures" were not protected by the original Provincial Parks Act. The wolf has suffered from an undeserved reputation for fierceness and wanton slaughter; and since he was believed to be a great destroyer of game, most North American governments including Ontario, tried to destroy him entirely. At first poison was used, and then wire snares; but despite a prodigious toll in numbers killed, he continued to survive in the parks. At last the Department came to realize that even the wolf might have his place in the wildlife community, and changed its policy from one of extermination to one of control.⁴⁹

Fishing has always been one of the main natural attractions of Algonquin and Quetico. On purchasing a Park fishing license, a visitor was allowed to fish in the lakes and streams of the preserve, but with rod and line only. All other means, including nets, spears and night lines, were strictly prohibited. As a wartime measure,

however, fishing with nets was permitted in Lake Opeongo during World War I. Thereafter the steady increase of visitors and therefore of fishing resulted in lakes becoming depleted, especially those near the railway and highway or around the hotels and lodges. This was especially true in Algonquin, which was not so remote as Quetico. The Department of Lands and Forests therefore, in co-operation with the Department of Game and Fisheries, began a programme of restocking the lakes, to keep the fish population high.⁵⁰ In 1915 the Superintendent of Algonquin recommended the establishment of a fish hatchery, to facilitate this re-stocking.⁵¹ This was followed by carrying out a policy of closing lakes to fishing in alternate years, to give the fish a reasonable chance to spawn.⁵²

The ability of the public to use the parks depended chiefly on transportation. For parks like Rondeau and later Ipperwash, getting to them was never a serious problem. Frequently, in fact, too many people could get to them; by 1920 one could see as many as five hundred cars driving through Rondeau on a Sunday.⁵³ Algonquin and Quetico, however, still remain relatively inaccessible.

When Algonquin was first established there was no way into the park except by canoe, or along rough logging roads, or on foot. In 1896 J. R. Booth's railway pushed through the southwestern corner; and by 1915 the Canadian Northern had crossed the northern portion of the Park, opening up "one of the finest sections in America from an angler's point of view".⁵⁴ As late as the 1930's, however, the Superintendent was still complaining about the inadequacy of the railways. By that time the Canadian National Railway was running trains into the Park, but not through it. Also, all the roads leading up to the park were, he claimed, third-rate.⁵⁵ In 1933, in answer to these demands for access, the Government began to build a road from Huntsville to Whitney which, when completed in 1936, brought in a flood of transient visitors by automobile.⁵⁶

Quetico, all through this period, remained totally inaccessible save by canoe, and later by aircraft. The Canadian Northern Railway, which had become part of the Canadian National, ran parallel to the northern boundary of the park, but few visitors availed themselves of its services. As late as 1921, complained the Superintendent in his report, trains were not even scheduled to stop at Kawene Junction.⁵⁷ Most visitors penetrated by way of Ely or Winton, Minnesota, crossing the border in canoes. Quetico was "canoe country"



TOM THOMSON fishing in Algonquin Park, where he worked as guide and fire-ranger during the summer months, c. 1915

and there were powerful men who wished it to remain so – a wilderness area.

Nowadays, aircraft have made Algonquin and Quetico easier to reach. In a few hours visitors can drop down by hydroplane on to a lake previously accessible only as the result of many days canoeing. This change intensified the problems of controlling access, enforcing park regulations and preventing over-fishing of lakes in

the interior. These problems, indeed, were evident in Quetico even before the Second World War;⁵⁸ but only at the end of the war did the use of aircraft to take parties of tourists into the parks alter the whole position. The Department, though increasingly aware of the problem, took no drastic action until 1956 when, in cooperation with the Department of Transport, it designated certain lakes on the periphery of the Park as landing-spots under the Aeronautics Act; on which, and only on which, private aircraft might land.⁵⁹

As transportation improved, the number of people visiting the parks grew steadily. Rondeau and Ipperwash early in their existence had felt the pressure of the masses eagerly seeking a brief respite from city life. But Algonquin's development was much slower. One of the first and most constant users of the Park was boys' and girls' camps.⁶⁰ There, in 1902, the first group of Canadian art students from Toronto discovered, by making a canoe-trip from Canoe Lake to Opeongo Lake, that the Park scenery offered a challenge to their brushes and sketchbooks. This canoe trip was the precursor of regular excursions made by artists into Algonquin Park, which continued until around 1917, when the War interfered. In 1912 the most famous artist associated with the well-known "Group of Seven", Tom Thomson, began to find in the Park the inspiration that he needed to express his conception of the essence of Canada's north-land.⁶¹ He settled there and, until his death in 1917, painted many of his most famous landscapes there, including the sketch reproduced on the frontispiece of this book. Incidentally, during his last years, the Park enabled him to earn a livelihood by working in the summer as a fire-ranger and guide. Thomson is probably the most distinguished Canadian ever to have served in these capacities.

Another colourful character associated with the Park's early years was Archie Belaney, the English lad who turned "native Indian" and later, under the soubriquet of "Grey Owl", gained fame from his popular writings and activities on behalf of the beaver. In 1908 Belaney, for a bet, challenged the park rangers to catch him as he crossed the park without a license. He was chased by ranger Mark Robinson and saved by him from an ignominious death by freezing in a beaver pond into which he had fallen.⁶²

As time went on, the type of person who visited the parks began to change. From the beginning Rondeau and Ipperwash had been patronized by middle class people with moderate or low incomes,

who were satisfied with a picnic or a day's outing. By contrast most of the early visitors to Algonquin were reasonably wealthy Americans. Only as access became easier and cheaper could native Canadians afford to visit the place. But when this happened, Canadians soon came to outnumber the Americans greatly. They began to take a new pleasure in the wildlife of the Park; people flocked there in the hope of seeing animals in their natural habitat and, with the deer increasing in number and tameness, they were rarely disappointed. After World War II, when there was a car in every garage, almost any person or family could afford to camp out in the wilds of Algonquin and, at least, watch for wild birds. Incidentally, the pheasant aviary at Rondeau proved an attraction to the wandering deer.

The Royal Commission of 1893 had envisaged accommodating visitors to the park in a few hotels, of the British type. But the Department's policy was to allow as little commercial development as possible, and then only on a concession basis. An exception was made in the case of Algonquin. The first decade of the twentieth century saw the Grand Trunk Railway allowed to build Camp Nominigan on Smoke Lake and Camp Minesing on Buret Island Lake and to open the Highland Inn on Cache Lake.⁶³ Ten years later there were five hotels and two camps in the park.⁶⁴ By 1942 the number had grown to eight, and various outfitters and canoe liveryies had been established for the use of visitors. Yet by the end of World War II the facilities were embarrassingly inadequate to handle the growing mass of weekend tourists. In the southern parks, which were nearer to settled areas, hotels and lodges were not encouraged, to avoid competition with already established private enterprise. The Superintendent of Rondeau pleaded for a hotel, but to no avail.⁶⁵ Other facilities, however – such as a refectory, picnic pavilion, boat livery, bathing houses and refreshments stands – were provided, the three latter on a concession basis.⁶⁶ Electricity was an added convenience at both Rondeau and Ipperwash.⁶⁷ Only Quetico, being entirely cut off, had no such conveniences. The visitor (usually American) went in by canoe, carrying everything he needed on his back. The only improvements made were the cutting out, clearing and marking of portages. In 1954 Quetico was the same canoe country it had been since its start in 1913.

Down to 1954 it was the policy of the Department to lease land

for cottage sites in some of the larger parks. Such leases were usually for twenty-one years with a renewal clause for another twenty-one years. The lessee paid for the survey and was charged an annual rent. Rondeau was very popular with lessees from the beginning,⁶⁸ and Algonquin scarcely less so. There land could be leased both for private cottages or for commercial sites. The leases were restricted to the shores of certain lakes near the railway in the south and, after 1935, near the new highway. Thus the interior of the park was kept entirely free from human habitation.⁶⁹ The demand for leases grew steadily, in proportion to increased accessibility.

Although land in Quetico could be leased, its inaccessibility imposed narrow limits; and by 1954 only three such leases had been issued.⁷⁰ There were plans also to survey and lease in Sibley, but this had not progressed far by 1954,⁷¹ when the Department decided to discontinue its entire policy of leasing. All wilderness-type parks were, in future, to be returned as nearly as possible to their natural state. To do this, the Government must regain complete control of all lands and buildings within the parks. Therefore it decided that all leases were to be allowed to run out, and that those which obstructed park development were to be expropriated.⁷²

One of the purposes of Algonquin Park as outlined by the Royal Commission of 1893 was to serve as a field for research in silviculture.⁷³ At first this purpose was largely neglected, although some research work was attempted by the Department in the 1930's, only to be dropped during the depression. Very little more was done until the Swan Lake Forest Reserve was set aside in 1950. There a major step forward was taken in the regeneration of yellow birch, which was extended all over the Province by 1956. From that time on, most silvicultural research in Algonquin Park has been devoted to sugar maple improvement.⁷⁴

The Park has always been a place eminently suited to wildlife research; but not until the 'thirties' was a programme developed for studying beaver and other small mammals, various mollusca and the diseases which affected the ruffed grouse.⁷⁵ In 1944 a wilderness research area was set aside, where there was to be no interference with natural conditions of wild life. Here botanists and zoologists hoped to make fruitful studies of the interdependence of native flora and fauna; and they have carried on continuous research in this field ever since.⁷⁶ Perhaps the most important studies, however, have

ALGONQUIN PARK SCENERY



Opeongo Lake, from the air



Oxtongue River from Tea Lake Dam

been those concerning fish. On the invitation of Frank MacDougall, who became Superintendent of the Park in 1931, Professor W. J. K. Harkness of the University of Toronto began a programme of fisheries research centering on Lake Opeongo. There in 1936 he established the Ontario Fisheries Research Laboratory from which to carry on a study of fish in relation to their environment, with a view to setting up a plan of fish management.⁷⁷ In close connection with this programme, fishermen were invited to take part in a "creel census" of their catches, to help the Department plan its re-stocking and closing of the lakes. Similar work was inaugurated in Quetico in 1944 and in the newly formed Lake Superior Park.⁷⁸

Until recent times, visitors to Algonquin Park were left to their own devices for enjoying the wilderness. But in the summer of 1943 Frank MacDougall asked the late Dr. F. R. Dymond, of the Royal Ontario Museum, to undertake a nature education programme to begin after World War II.⁷⁹ In 1944 Professor Dymond extended the scope of the enterprise, by conducting field nature trips, constructing a nature trail and giving series of indoor nature talks.⁸⁰ His aim was to give the visiting public a dynamic picture of the wildlife community as a whole, and to encourage them not to rest content with a merely statistical identification of the various plant, animal and bird species in the park.

From this simple beginning has grown up an extensive and elaborate provision of educational activities. By 1954 four nature trails had been opened and laid out, each marked with an easily found entrance and trail labels. The principal shrubs and plants along these trails were carefully identified and labelled, enabling Dr. Dymond to conduct regular pioneering hikes for the purpose of making visitors better acquainted with the ecology of the whole park. From 1946-48 there had been a makeshift museum, housed in a large tent; but in 1953 a permanent building was provided, to house displays of flora and fauna. In this museum daily lectures were given by park naturalists, who also visited and lectured at the various lodges scattered through the park. Similarly, they called at children's camps and encouraged them to appoint nature counselors, and to compete for the awards of naturalist certificates and badges, commenced in 1953.⁸¹ Thus from modest beginnings in 1944 an energetic creative service of information has been developed, to

enable the visitor to Algonquin to enjoy to the full the opportunities that the park offers him.

The educational work begun at Algonquin was first extended to Rondeau Park in 1947,⁸² but there it hung fire and did not really catch on until 1952, when Dick Ussher began to conduct a successful programme of hikes, illustrated talks and nature trails.⁸³ This met with reasonable success, in spite of the many competing activities which went on in a park that was so unlike Algonquin.

To sum up, the sixty years from 1893-1954 were a period of slow, steady, pragmatic development in Ontario's provincial parks. Looking back from today's point of view, we can see that they lacked an overall plan of development; instead, they increased in number and in services as the demand grew. Though originally their purposes varied, they all came in course of time to concentrate on outdoor recreation. In the south the parks from the outset attracted weekend campers and picnickers; in the north they catered more to long-term campers, canoeists and wilderness enthusiasts. They all survived various trials, in the shape of attempted commercialization, destruction of the forests and waterways by unplanned economic development, and destruction of the fish and wildlife by over-use. For sixty years the parks prevailed over all these obstacles, until in 1954 the far-sighted vision which had come first, in 1885, to Alexander Kirkwood, James Dickson and R. W. Phipps was realized to an extent and on a scale that they would have hardly dared to anticipate.

SETTLING NEW ONTARIO



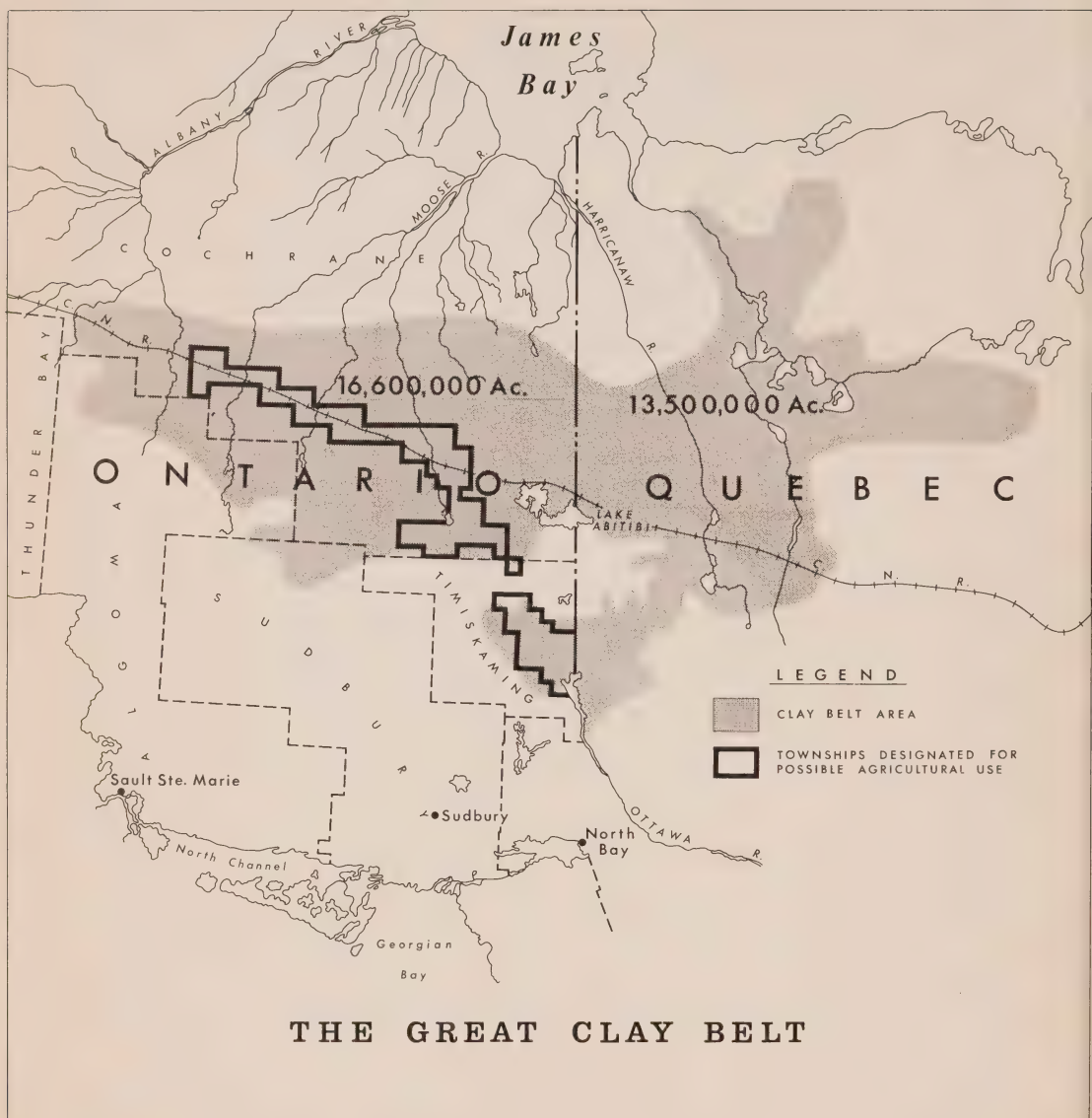
At the turn of the century many young Canadians, moved by patriotic fervour and natural love of adventure, went off to South Africa to serve in the Boer War. While there, they may have heard news of an important discovery in northern Ontario that promised to open up exciting prospects for the pioneering farmer and woodsman. Down to 1899 the northern and north-western parts of the Province (except for sections of the Thunder Bay and Rainy River Districts) had been virtually unknown. But for some years previously the building of railways and the opening of mines had begun to stimulate public curiosity about "the great triangular-shaped tract which has its base on the height of land, its apex on James Bay, its western side on the Albany River and its eastern side on

the boundary between Ontario and Quebec.”¹ This tract was generally labelled “New Ontario”; and public men were pressing the provincial government to explore it thoroughly and open up its resources. These resources, it was suggested, “while not indicating the existence of an Eldorado, are yet sufficient to warrant the belief that the northern and western portions of Ontario are quite capable of becoming the home of a hardy, thrifty and prosperous people, many millions in number.”²

Soon after writing these words in his Annual Report for 1899, Crown Lands Commissioner E. J. Davis received authority from his Premier, Hon. George W. Ross, to translate them into action. Accordingly, in 1900 he sent out ten large and well equipped expeditions, each headed by a land surveyor and staffed by a geologist, a woodsman, a land and timber estimator, to explore the northern portions of the districts of Nipissing, Algoma, Rainy River and Thunder Bay. The explorers were instructed to find out what the soil was like, how much and what sort of timber grew there, the character of the rocks and minerals found there, the general features of the country and its water communications and power resources.

The most notable result of these explorations was the discovery in 1900 of a tract of arable land extending across the Province north of the height of land, and comprising twenty four thousand five hundred square miles of clay loam soil “nearly all suitable for farming purposes”, well watered and surrounded by millions of acres of potential lumber and pulpwood. Thus the “Clay Belt” was born as a main feature of “New Ontario”. Needless to say, it became at once an object of intense rivalry between Liberals and Conservatives, both anxious to claim the credit for having brought it to light.

The Crown Lands Department lost no time in encouraging settlement in “New Ontario” by opening up the Clay Belt both to land sales and to free land grants. Here was a grand opportunity to reward Canada’s volunteers in South Africa by giving them free land, and at the same time to attract to the north settlers from other parts of Ontario and from abroad. Under the military settlement scheme now announced, the Province appropriated certain lands for Boer War veterans only; but public opinion soon forced an enlargement of the plan to take in militia volunteers who had participated in the Fenian Raids and the Riel Rebellion operations. So



popular did the settlement scheme prove that the Department received eighteen thousand applications for land and had to engage extra staff to cope with them.

Under the terms of the Act of 1901, a variety of persons who had participated in the three campaigns became eligible for land grants.⁴ They included soldiers, nurses, chaplains etc., or their next of kin. No doubt, these wide categories added to the later problems of administering the Act. Each eligible person was allowed one grant only, of one hundred and sixty acres, to be selected from lands in any township except those set aside for the University of Toronto, or considered valuable for timber. The veterans were given location certificates valid for ten years and free of all settlement duties, provincial and municipal taxes for the same period. If, however, they transferred their land to any person not qualified under the Act, then settlement duties had to be performed and taxes (other than school taxes) paid. All pine timber on these lands was reserved to the Crown.

Nearly fourteen thousand certificates were issued, but not all of these resulted in location. Many certificates were surrendered, and others (over a thousand) remained unused as late as 1928. As early as 1905 permission was given to use certificates as scrip that could be applied as money and transferred from hand to hand. This led to the development of a market for scrip without any reference to the land it represented.

Before long, individuals took advantage of the situation to incorporate public companies to use veterans' land grants to develop townships. The Ontario Veterans' Land Company was formed to acquire five townships in the Abitibi area and act on behalf of three hundred veterans for the purpose of settling the locality. This was not at all to the liking of Aubrey White, who protested to the Premier that his Department had always hitherto refused "to recognize any association for the purpose of controlling or locating veterans' land grants . . . taking the position that the individual veteran was in all cases entitled to exercise his rights to make personal examination and location of his land if he chose to do so."⁵ He foresaw possible friction between the settlers and the Company, and pointed out that much of the land requested by the Company (for sale at what he considered the excessive asking price of three dollars per acre) had already been applied for by veterans. Although

a compromise was reached and an agreement signed between the Department and the Company, it was later cancelled in 1911.

Most of the veterans who located under this scheme settled in the Temiskaming area; but quite a few wanted to have their lands in the good farming districts of southern Ontario where, of course, little if any was now available. By 1920 it was apparent that the Department had serious misgivings about the plan. The Act was amended to provide that all lands not yet patented or located under the Act should revert to the Crown. Further, all land was inspected to find out if the owner was living on it; if not, he was ordered to become a *bona fide* settler, or else forfeit his lot. In 1928 the Department admitted that persons other than the intended veterans were now reaping the benefits of the scheme, and in particular taking advantage of the "no settlement duties" proviso of the Act.

Long before this, however, World War I had taken place and had given fresh impetus to the military settlement plan. In 1917, the Returned Soldiers and Sailors Settlement Act sought to combine the two ideas of rewarding certain segments of the population while speeding up the settlement of Northern Ontario. Once more land grants were given to the veterans but this time the folly that vitiated the earlier scheme—exemption from settlement duties—was not repeated.

Most settlement under this Act was again directed to the Clay Belt area of New Ontario, about whose potential wealth the most optimistic forecasts were still current. The President of the Ontario Land Surveyors, T. B. Speight, estimated that three-quarters of the Clay Belt was good farming land. Even as late as 1930, a writer asserted that "there were sixteen million acres of fertile clay in Northern Ontario and most of this land is . . . better in quality than much of the land between the Ottawa and the St. Lawrence."⁶ However, the point was stressed that only those prepared to work hard and face the difficulties of pioneer life would be likely to make good in this area.

Building railways across the Northland—such as the National Transcontinental from Cochrane to Hearst, and the Temiskaming and Northern Railway—greatly helped the work of development. The Government gave the railways grants of land; and both they and it promoted settlement by issuing a number of publications extolling the attractions of the Northland.⁷ As a rule, land in the Clay

Belt was offered for sale in one hundred and sixty acre lots, at fifty cents per acre. Purchasers could occupy their land by proxy, provided that the proxy fulfilled the necessary settlement duties of residence and clearance.

In all, six townships were set aside under the Returned Soldiers and Sailors Settlement Act of 1917, but only one of these was actually settled. Before long the Government began to concentrate its efforts on one project which it considered eminently suitable, the Kapuskasing Colony. For this, great care was taken to choose and train veterans. First, a committee of government departments and veterans organizations, etc. made a selection from the numerous applications. Next, the selected veterans were given a course of instruction in northern farming techniques at Monteith Agricultural Training Depot. In the meantime, land had been set aside for them near Macpherson (now Kapuskasing) on the line of the National Transcontinental Railway. The veterans received their land in eighty-acre lots (later enlarged to one hundred acres), so located as to ensure contiguity between neighbours. Officials hoped this would encourage community life, which had so far been almost non-existent in northern settlements. In advance of settlement ten acres of each lot was cleared; and each veteran was given a grant of one hundred and fifty dollars towards building his house and a loan of five hundred dollars for tools and livestock, not repayable until after three years. The government also paid the costs of transporting the veteran and his family to the chosen farm site and undertook that, if he performed the usual settlement duties, he would get his patent of ownership after five years.⁸ As a further help, a railway siding and half a mile of road were constructed at Kapuskasing, and a sawmill erected to provide lumber for buildings.

By January 1920 a hundred and one veterans had been settled in the Colony, at a cost to the Province and the country of eight hundred thousand dollars. But already by that time the failure of the scheme was becoming apparent. Trouble had broken out on every hand; for instance, unmarried veterans claimed they were being unfavourably treated in terms of payment, as compared with married veterans. After much bickering, the Government set up a commission of enquiry which thoroughly studied the situation and made a report at the end of the year. This report offered no comfort regarding land settlement schemes in the north. It criticized the

selection committee for failing to choose the right type of applicant and for picking men "who, when faced with unexpected but not unusual conditions, cursed the country and the Government . . . believing their experiences were out of the ordinary and not anticipated by those in authority."⁹ Many of the settlers had expected that the Government would provide them with work at good wages near their homes, and were much incensed when they found that they were expected to fend for themselves.

The commission recommended that the Colony should be disbanded¹⁰ and that all unsold land be thrown open to general settlement. As a result, over twelve thousand acres were sold to settlers in the four townships of O'Brien, Owens, Williamson and Nansen. Also, part of the land was sold to the Spruce Falls Company which, after obtaining large timber limits in the area, built a pulp and paper mill at Macpherson and later developed a company town (Kapuskaing) to house its employees.

During the nineteen-twenties the market for timber was good, and many of the incoming settlers began to devote more of their energies to it than to their lands. To discourage such "wood farmers", from 1925 on lots were reduced in size to eighty acres, and a settler was not allowed to buy more Crown Land until he had fifty acres of his original lot under cultivation. Already, however, the newcomers had discovered that the harshness of the northern climate, with its short growing season of barely two months and its high summer rainfall, made arable farming in the Clay Belt unprofitable. Dairy and potato farming, which developed slowly in its place, suffered from distance of markets and high cost of transportation.

In 1927 another attempt was made to settle the Clay Belt, when an amendment was passed to the Forestry Act allowing settlers on the barren sandy soils of southern Ontario to remove to the Temiskaming District and other parts of the Clay Belt. A number of British settlers from the Windsor area, and a group of land-hungry Mennonites from southern Ontario took advantage of this offer and migrated with high hopes, but fared little better than the returned soldiers.

The final government attempt came under the impact of the trade depression of the 'thirties'. In April 1932 the Dominion Parliament passed a Relief Land Settlement Act, under which the Dominion Government, the Provincial Government and the munici-

pality from which the settler came, were to co-operate, by making grants of two hundred dollars each per head, to bring men from depressed urban areas in the south to settle on the land in the north. The Provincial Government was to be responsible for administering the settlement, with the help of a joint board of the three governments concerned to screen the would-be settlers. The Crown Lands agents were to select the lots from which the settlers would make their choice. These lots were to be located along main railway lines running through the Thunder Bay, Hearst and Kapuskasing districts. The six hundred dollar grant could be used for transportation, land purchase, building and equipment costs. The scheme would eschew paternalism and seek to revive the traditional "pioneering spirit" in the settlers. They would purchase their own lots, but not be required to begin paying for them until two years had elapsed. Those in charge of the settlement scheme were fond of describing it as a 'Back to the Land' movement, which would help to correct the growing disproportion between the urban and rural populations of the Province.¹¹ But in an era when there was such a pronounced drift towards city life and such a lack of markets for farm produce in time of depression, it was questionable whether the farm could be to ordinary folk the utopia that some officials supposed. Moreover, in spite of the efforts of the screening committee, most settlers under the scheme were not farmers, or their experience was limited to the cleared lands of southern Ontario. Among them were many unemployed persons, mainly from Windsor and Toronto, who had no knowledge of either farming or of cutting pulpwood – the only alternative occupation in the Clay Belt. It is not surprising, therefore, that the scheme fell between the stools of providing relief from unemployment and settling "New Ontario".

One interesting and rewarding by-product of the relief scheme was the settlement of Holland Marsh in York County, southern Ontario. The Netherlands Government, which had a responsibility for Dutch emigrants to Ontario who required relief, offered to take the place of a municipality under the Act of 1932, and share the cost of transferring a group of Dutch families from Burlington, Ontario to the Marsh, which at that time was still an uncleared, uninhabited swamp. The Dutch families were each given a twenty acre strip of land running parallel with Highway Eleven, and encouraged to apply Dutch drainage techniques to the task of clearing

their lots for cultivation. So great were the difficulties encountered in coping with the swamp that the settlers had to shoe their horses with wooden boards, to which the horses became so accustomed that they refused to go out of their stalls to work without them! In a surprisingly short time the task was completed and the Marsh pioneers found themselves the owners of some of the deepest, richest and most profitable market-garden soil in Ontario.

Under the new Liberal régime of 1934, the Relief Land Settlement scheme underwent a change. It was extended through 1936; but Premier Mitchell Hepburn indicated that the policy of subsidising people who desired to settle in northern Ontario would be ended. "We are going out of the business of colonisation", he announced. "It is unsound in principle and simply throwing good money after bad."¹² By 1940 the scheme had been laid to rest. None-the-less the Department of Lands and Forests continued to maintain that the money spent on the scheme had not been wasted. "In all probability", said the Annual Report for 1937, "the provincial share of the total outlay is less than would have been the case had those involved remained on direct relief in large centres. . . . Those who have received assistance and remained on the land have had the benefit of an opportunity to assure themselves a change of environment and for the most part improved health."¹³ Altogether, six hundred persons had been settled on the land under the scheme. By the outbreak of World War II barely half of these remained; while by 1957 only eight of the original one hundred and twenty-four relief settlers in the northern area, and only two of one hundred and five in the Kapuskasing-Hearst area were left; and few even of those were still trying to farm.¹⁴ By now the day of full scale colonisation schemes in northern Ontario was about over.

Meanwhile – to go back a little – throughout the first two decades of the century the Ontario Government had continued to encourage and help the individual settler who wanted to come into either the north or the west of the Province. In the early years a large influx of settlers, under the Free Grant and Homesteads Act, continued to pour into the Temiskaming, Sudbury, Sault Ste. Marie, Thunder Bay and Rainy River areas. Many of these people applied for lands which they were not prepared to take up, and tried to hold them for speculation instead of developing them. Others were more interested in the timber than in the land, and were locating on lands unsuitable

EMIGRATING TO NEW ONTARIO



Ontario Government Immigration Office, 1913



Party leaving the Old Country for Ontario in 1913

for farming. To meet this problem the Department began appointing a new type of officer, called a homestead inspector,¹⁵ whose duty was to make an independent report on every lot applied for in a free grant district. He had to make sure that at least half of the lot was good farming land, and that the lot was not valuable chiefly for its timber. It was also his duty to insist everywhere on strict compliance with settlement duties, and to visit and check every location where application for a cancellation had been made. The first homestead inspector, W. F. Scott of New Liskeard, was appointed in 1903; and by 1919 there were eleven of them, some of whom combined their functions with that of land agent. The Department claimed that this administrative change was successful, although the idea had come too late to save many settlers in the older districts, such as the Ottawa-Huron Tract, from locating on unprofitable lands.

In 1912 the Government further pushed the settlement of the north by creating a Northern Development Branch within the Department,¹⁶ to carry out the Development Act passed in the same year. The Act set aside five million dollars for construction and improvement, advance of settlement and colonisation, and assistance of settlers, etc., in northern Ontario. Most of the money went on building roads: but in 1916 a Settlers' Loan Commission was set up, to advance money at low interest to settlers on their land, chattels and crops.¹⁷ The Northern Development Branch remained a part of the Department until 1926, when it became a separate department.

The peak of free grant administration was reached in 1908, when no less than two hundred and ninety-seven thousand five hundred and forty-three acres (two hundred and thirty-one townships) were on the free grant list, and the Department opened several new land agencies to push land sales in the Clay Belt. Settlers who in 1908 were limited to the purchase of one hundred and sixty acres, became eligible in 1912 to buy one hundred and sixty more, if they had obtained their patents and discharged all their settlement duties on their first location.¹⁸ The price of land now ranged from seventy cents to one dollar per acre, except in Rainy River where it was as low as fifty cents.

In 1913 the Free Grant Act became Part II of the Public Lands Act and the Government took additional powers to fix prices, set

conditions of sale, and remove trespassers from public land. Mining claims were now becoming a complicating factor in land sales; and in 1913¹⁹ the Deputy Minister of Lands, Forests and Mines issued a memorandum that under the Act no mining claims were to be allowed on free grant land and that, once a settler had fulfilled his settlement conditions, his patent gave him the ownership of any mines and minerals found on his land. Another regulation provided protection during the war for enlisted men who had settlement duties to perform.

After World War I, the Government created a new post, that of Supervisor of Settlement.²⁰ The duties of Colonel W. R. Smythe, who was appointed to this position, included visiting all northern areas, keeping in close touch with the settlers, giving them advice and helping to redress their grievances. From 1925 onwards settlers in the Clay Belt were limited to an amount of eighty acres for each location. The purpose of this restriction was to encourage more intensive cultivation of suitable areas, and to make the settlement more compact.

In general, the results were disappointing. Nothing, it seemed, could stay the gradual decline of agriculture in the Clay Belt as a whole.²¹ Arable farming virtually disappeared, following the migration of the Mennonites westward to the easier lands of the Prairies. Dairy farming was another matter. Where the farm acreage was large enough and the settlers had enough capital, it prospered and left visible evidence of its prosperity in the many splendid large farms to be seen bordering Highway Eleven in the New Liskeard, Engleheart and Swastika areas. However, the small dairy-farmer, hampered by climate, lack of capital and too distant markets, could not prosper. For him, hay and potatoes remained the only successful cash crops. Most small settlers who stayed in the district (including many French Canadians who came in from Quebec) became part-time farmers, working their lands in the summer and working in the bush cutting pulpwood during the winter. They survived because the Clay Belt, with its growing forest and mining industries, was a high-wage area with a considerable demand for seasonal labour.

The trade depression of the 1930's had a dampening effect on the administration of the Lands Act and on the progress of northern settlement generally. With the decline of free-grant locations, five land agencies were closed down in 1931 and the duties of other

Crown Lands agents consolidated. Of the eighteen who remained in 1933, several were acting as homestead inspectors, Crown timber agents or mining recorders, as well as land agents.

Down to World War II, the Department continued to try and weed out pulpwood farmers and encourage settlers to clear their land. But as the number of farmers declined, it was forced to take over unproductive lands and use them for wildlife or tourist purposes. A policy of leasing and licensing Crown lands was developed during the 1930's, for such purposes as water-power harnessing, summer resorts, hunting lodges, etc. In each case the land was licensed or leased according to well-defined conditions, the value of the land, the nature of the lessee and other conditions. Tenure was usually for a period of twenty-one years.

In 1924 a Provincial Land Tax was introduced for the first time applying to occupied lands in "unorganised"* territory, which comprised some eighty-five per cent of the whole land area of the Province. The inhabitants of these unorganised areas were receiving the benefits of services provided by the Government of Ontario; accordingly, it seemed only fair that they should contribute to the cost. Under the new Act all property owners were listed and assessed on the capital value of their property. The tax levied was a small percentage of this value – one per cent at first, later (1954) raised to one and a half per cent. Since most of the land belonged to the Crown, the "owners" included tenants of the Crown, occupants and other persons having a contractual interest in the land. The Department of Lands and Forests was charged with the administration of the Act, including the preparation of the assessment roll and the collection of the tax; while the Minister or his Deputy had to certify all cases where the owner fell in arrears with tax payments and therefore became liable to forfeiture. In 1959 the taxation was extended to pipe lines and, four years later, to railways, telegraph and telephone lines in the unorganised areas.²² All these provided a very good source of revenue for the Province, rising continually with the passage of time.

As an area for agricultural settlement the Clay Belt had not been a success; but for the development of its mining and forest resources the prospects grew steadily brighter.

*"Unorganised" means not covered by any organised municipality.

CHANGES IN THE DEPARTMENT THROUGH WAR AND DEPRESSION



By 1905 the Crown Lands Department was getting out of date. The creation of parks, the development of mining and the opening up of "New Ontario" called for a widening of its scope, to take in natural resources in general, rather than land and timber alone. In that year, accordingly, the new Conservative administration of Sir J. P. Whitney transformed the former Crown Lands Department into the Department of Lands and Mines (to which the title "Forests" was later added) under a Minister and Deputy Minister.¹ At that time the new Department had seven branches – Sales and Land Grants, Military Grants, Surveys and Patents, Woods and Forests, Accounts, the Bureau of Mines and the Bureau of Colonisation and Forestry. The staff at headquarters numbered fifty-three,

and in the field thirty-five land agents and over five hundred seasonal employees, including three hundred and sixty-one fire rangers and seventy-four woods rangers.²

Soon afterwards, the Bureau of Colonisation and Forestry was transferred to the Department of Agriculture where, except for a temporary return during World War I and the post-war transition years, it remained. The Mines Bureau, under the charge of a Deputy Minister of its own, maintained a quasi-independent status inside the Department until 1920, when its growth warranted its becoming a full-fledged Department of Mines. Apart from this, the branches remained virtually unchanged during the last decade of Aubrey White's régime, except for the creation in 1912 of the new Forestry Branch under E. J. Zavitz. In the same year the Legislature passed an Act providing funds for the construction of roads and public works in northern Ontario which, it was understood, would become a joint responsibility of the Lands, Mines and Forests Department and the Public Works Department.³

The main duties of the small Forestry Branch in its earliest years were reforestation and railway fires prevention.⁴ The non-railway half of the forest protection work – affecting mainly the forest reserves of the north – continued to be the responsibility of the Woods and Forests Branch, where it was regarded as a seasonal job, to be handled at headquarters by a couple of clerks and in the field by the Crown timber agents and the lumber companies. Zavitz, controlling a staff of railway inspectors and having plenty of opportunities to travel, became necessarily more and more concerned with forest protection; especially as he could see that the progress of reforestation in northern Ontario depended on the effectiveness of fire prevention in northern forests. In 1917 he was instructed by the Minister, Hon. G. H. Ferguson, to draft fresh fire prevention legislation and to take over full responsibility for applying it.

By this time the continuity of the Department's growth had been interrupted by the sudden death of Deputy Minister Aubrey White, in July 1915. White had always been first and foremost a 'Woods and Forests' man, concerning himself with administering the timber concessions, keeping the lumber companies satisfied and raising the timber revenue of the Province to its highest point. It was his proud boast that his Department had, since 1867, sold twelve thousand square miles of timber and brought in a revenue of forty

and a quarter million dollars to the public treasury, whereby "the people have been relieved of taxation by the sale of the natural resources of the Province."⁵ But cautious as he was, White was open to innovation. He had given the Province its first system of fire protection. He had appointed the Province's first professional foresters. And in his later years he had coped effectively with the rising tide of pulp and paper, and had introduced a semblance of order into the new industry's speculative gyrations. At his death, however, the lumber industry was in a state of temporary chaos, due to World War I. Enlistment of men in the armed forces had deprived the lumber companies of much of their normal labour supply. The cessation of building operations had reduced the demand for timber; and consequently, the Government's revenue from timber had fallen off. At the same time the Department itself had had to curtail its activities, having lost members of its staff to the armed forces.⁶

There was, therefore, at this point, urgent need for a firm and experienced hand at the helm of the Lands and Forests administration; but no such hand was forthcoming. White's successor, Albert Grigg, owed his appointment to political convenience; he had no personal knowledge or previous experience of the Department's work. To make good the deficiency two senior officials, the chief clerk of the Lands Branch (J. J. Murphy), and the chief clerk of the Woods and Forests Branch (J. A. G. Crozier), who were both due to retire, had their terms of service prolonged, in an advisory capacity, for the next six years.⁷ In fact, they stayed on as long as Grigg remained Deputy Minister. But the result of this was to create an even more serious staff hiatus in 1921, when not only Murphy and Crozier, but eight other senior clerks were all superannuated simultaneously.⁸ By that time four of the ten had served fifty years or more with the Department; and one, D. G. Ross, the Chief Accountant, could date his service back to six years before Confederation! Their going marked indeed the end of an era.

From 1915 to 1921, then, the Department had a make-shift character, being headed by a political Deputy Minister, buttressed by a group of septuagenarians who were well versed in the ways of Aubrey White, but not otherwise well suited to grappling with the problems of reconstruction in the post-war years – problems which involved handling the great timber boom that occurred on the return of peace, and the new military land settlements required for

returned veterans. Further, the work of developing the north generally, and in particular building more colonization roads, was actively resumed in 1916 under a special Commissioner for Northern Development, J. F. Whitson, who reported directly to the Minister.⁹ After Whitson's death in 1919, this work was continued under his successor C. H. Fullerton.¹⁰

In the Forestry Branch, under its younger chief, progress proceeded without a setback. Zavitz, after losing his first assistant, Newman, to war service, brought in for a two year period, Dr. J. H. White, the first graduate (1909) from the Forestry School in Toronto University. Dr. White helped Zavitz to organize the new fire districts on which the reformed forest protection service under the 1917 Act was to be based.

The next problem was hiring a core of men capable of directing the new districts. In his 1919-1920 Report of the Forestry Branch Zavitz defined the kind of men he wanted:

The direction of protective work in any district must be in the hands of a man who knows the basic principles of fire protection; who will make it his business to become thoroughly familiar with conditions of timber, hazard, settlement, etc., in every part of his district; who is capable of planning and constructing a system of lookout towers, telephone lines, roads, trails, etc., so as to make his district relatively safe at least cost. Along with these, he must be able to follow instructions, to give an intelligent report on any field matter, to estimate burned timber, to administer the forest laws, Railway Act, etc. In short, he must have been previously trained in the principles and work of forest protection.¹¹

The main source of supply of these "specially qualified men" was, of course, the Forestry School of the University. By 1922 twelve of its graduates had joined the Forestry Branch, three as district foresters and the rest as assistants;¹² and the number grew steadily during the following years.

But while the Forestry Branch was growing apace in this manner; and while the Lands Branch was tackling the huge task of resumed settlement (military and civilian) in northern Ontario, the Woods and Forests Branch, after relinquishing its share of the forest protection work, was 'labouring in the trough' of unsuccessful attempts to cope with the wiles of unscrupulous timber barons, spurred to a

frenzy of new activity by the post-war boom. Grigg's inexperience meant that a major share of allotting timber and pulpwood concessions passed into the hands of the Minister, the Hon. G. H. Ferguson, who was necessarily affected by political as well as purely business considerations. But in 1919 the wartime Conservative administration of Ontario was overthrown by a wave of discontent which returned to office the United Farmers Government, under the Hon. E. C. Drury.¹³ The new government was reformist and idealistic. It backed unreservedly the expansion of forestry, but directed its principal energies to exposing, in the person of outgoing Minister Howard Ferguson, the irregular practices that had grown up under his administration of timber. Justices Latchford and Riddell, who presided over the Drury Timber Commission of 1920-22, made it clear that although the Crown Timber Regulations required that "‘limits shall be offered for sale by public competition’ at an upset price after public notice, and that they ‘shall be awarded to the highest bidder’", Ferguson had "acted on the assumption that, as head of the Department, he had the right to deal with such matters ‘regardless of that regulation’".¹⁴ Nevertheless, the Commission failed to bring the indictment home to the Minister, and instead allowed itself to be sidetracked into recriminations directed against particular lumber companies, leading to litigation between the Crown and the Shevlin-Clarke Company.

While this Commission was still sitting, the Government took steps to reorganize the senior personnel of the Department. In 1921 Deputy Minister Grigg retired from the service, together with a number of his senior clerks. He was succeeded by Walter Cain, who had been acting as his assistant during the previous year. Evidently Drury hoped that Cain's appointment would pave the way for a drastic overhaul of the whole structure of the Department. His thoughts had been moving in this direction ever since, soon after his election as Premier in 1919, he had received a memorandum from Robson Black, the Secretary of the Canadian Forestry Association. This set forth a three-point programme of reform, to include elimination of patronage, establishment of a Forest Advisory Board and the transfer of responsibility for the forests of the Province into the hands of competent, technically trained personnel.¹⁵

To work these ideas into shape Drury, on the advice of Dr. Fernow, hired as consultant the former first provincial forester in

Ontario, Dr. Judson F. Clark. In August 1922 Clark presented the Premier with a report which was sufficiently radical to promise plenty of controversy.¹⁶ He pointed out that "for many years the harassing of the Minister and his secretary with personal and other appeals in the settlement of simple business matters, fully covered by law and departmental regulations, has wasted a vast deal of exceedingly valuable time, and greatly hindered the regular functioning of the Department."¹⁷ The time had come, he boldly suggested, to divide the Department into two separate departments, one concerned with lands, the other with forests. Each was to be headed by a Commissioner, both of whom would remain responsible to the existing Minister (the Hon. Benaiah Bowman). The proposed forest department would include, beside timber, forestry and forest protection, the care of provincial parks and of all "minor forest products" such as game and fisheries. The Commissioner of Forests would be "the business manager of the public forests" and "the real executive officer to carry out the policies, laws and regulations of the Department." The public must be made to understand that "hard luck stories of sick wives and children, personal losses and interesting angles of local political situations and such, have absolutely no place as a part of a business transaction having to do with the care of the public forest laws or the sale of the public forest products."¹⁸ The Commissioner must have "entire freedom, under the responsible Minister, to develop the Department along business lines so that the provincial forests may increasingly be a greater provincial asset and an ever-increasing source of provincial revenue."¹⁹ As an example of the business methods that he hoped to see adopted in his new scheme of reorganization, Clark revived his own sixteen-year-old criticism of the traditional Doyle Rule for measuring timber.²⁰

He urged that the Department should henceforth measure the wood it sold to lumbermen by a volume (cubic foot) unit instead of by the existing (board fee) unit. He pointed out once more that, as the diameter of the average log cut on Crown lands had grown steadily smaller with the passing of time, the Doyle Rule (in force in Ontario since 1879) had become an increasingly unfair method of measurement, tending to underestimate the sums that the lumbermen ought to be paying into the public treasury. However, Clark's recommendation on this matter had no effect except to arouse the wrath of the lumbermen. The Canadian Lumbermen's Association



WALTER CAIN, Deputy Minister of Lands & Forests
1921-41



ALBERT GRIGG, Deputy Minister of Lands & Forests,
1915-21



HON. ERNEST CHARLES DRURY, *First Farmer Premier of Ontario, 1919-1923*



HON. G. HOWARD FERGUSON, *Premier of Ontario 1923-1930. Minister of Lands & Forests 1914-1919 and 1926*

sent a deputation to Premier Drury to argue that "the Province is not only amply protected, but has been getting and will continue to get out of its standing timber as great a financial return, under the Doyle Rule, as it possibly can by the application of any other rule or unit measurement."²¹ The Government therefore decided that Clark's proposed change would not be worth the political trouble it would be likely to cause. Another twenty-five years were to pass before the Kennedy Royal Commission of 1947 pronounced definitely against the Doyle Rule and its elimination was finally secured.

Nor did a better fate await Clark's main proposal for reorganizing the Department under two Commissioners. There are signs, indeed, that the Drury Government did give the matter consideration; for the Minister of Lands and Forests in his Annual Report for 1922 referred to "the two outstanding and somewhat distinct units of the Department, viz. 'Lands' and 'Forests' ", and set forth the different functions which might be assigned to each.²² But any practical chance of implementing Clark's report vanished when the Drury Government fell from office after the election of 1923, and was replaced by the Conservative administration of the Hon. G. Howard Ferguson.

At this point, according to the Annual Reports from 1923 to 1926, the former Woods and Forests Branch ceased to have a separate identity in the Department.²³ After the superannuation of F. A. G. Crozier, the Branch's remaining personnel was transferred to Zavitz' Forestry Branch. Perhaps a complete merger of the two was contemplated; and for a couple of weeks Zavitz was actually in charge of both forestry and timber. However, he had no taste for the political implications of timber and no ambition to combine the two responsibilities, logical though such a combination might seem to be. He preferred to concentrate on reforestation, with a new assistant, C. R. Mills, taking charge of the development of the district fire protection organization begun by J. H. White. At the same time much of his attention was necessarily given to Maxwell's plan for starting the Provincial Air Service.

The Woods and Forests clerks, although nominally attached to Forestry, continued as a group to act under the supervision of the new Deputy Minister, Walter Cain. He took a keen interest in timber and applied to it his own particular talents for financial and

administrative detail. Every question of policy was referred to him for personal decision; and his criterion of efficiency was always measured by the state of the accounts. He was not a man of imagination or innovation. Yet he took steps to improve the field organization in several ways. From 1923 on it became the Department's policy in all important timber sales to estimate in advance the kinds and quantities of timber offered and to fix an upset price based thereon.²⁴ The cruises and estimates involved were made through the district Crown timber agents; while the mapping of important forest types was carried on through the Forestry officials, working in conjunction with the Provincial Air Service. In 1923 Cain appointed Major F. I. Hartt to perform the valuable coordinating function of "Inspector of Crown Timber Agencies and Supervisor of Operations in Connection with Timber Administration."²⁵ His task was to audit and inspect the Crown timber agencies throughout the Province, visit the scenes of timber and pulpwood operations and act as mediator in the settlement of disputes and the solving of problems that concerned the Crown and the lumbermen – also to promote the interests of conservation and reforestation. Hartt served in this capacity until his death ten years later. Other parallel appointments made by Cain during this period were those of T. A. Macarthur as Inspector of Crown Lands Offices,²⁶ a post he held from 1920 to 1928, when he became Mining Recorder; and of Colonel W. R. Smyth as Supervisor of Settlement in 1924;²⁷ the latter performed a function in regard to land settlement in the north similar to that of Major Hartt in timber. Also from 1921 onwards the Department gained a legal officer of its own, in the person of F. E. Titus, who in 1923 became head of its Solicitor's Branch.²⁸ A centralized system of filing had been in existence since 1916.

As the forestry, lands and timber functions of the Department continued their rapid development during the 1920's, a growing tendency appeared towards differentiating their activities for administrative purposes. In 1926 the Department of Northern Development was created; it took over the former Colonisation Roads Branch of the Lands and Forests, and with it its head C. H. Fullerton. In 1926 Forestry became a semi-independent activity, with the appointment of E. J. Zavitz as Deputy Minister of Forestry.²⁹ The annual Report of that year speaks of the Department being divided

into two parts, one dealing with "Lands and Forests proper", the other with the Forestry Branch. The former included the collecting and spending of money, land operations and settlement, surveys, water powers, timber sales, logging and lumbering operations, the pulp and paper industry, timber cruising and accounting. The latter covered forest fire protection, air operations, reforestation and forest investigation. The division of function that was emerging bears a superficial resemblance to Judson Clark's plan of reform three years previously – with the significant difference that matters relating to timber sales were kept separate from those relating to the forests. The separation was so complete that in 1936 A. R. M. Lower commented that the Forestry Branch had "little to do with policy". A "good and zealous" technical staff was confined to educational and protective measures and kept far from control of forest policy. Such a system inevitably had a bad effect on the Branch.³⁰

In 1928 the Department gained a third Deputy Minister. The old office of Surveyor General, dormant for nearly a century, was revived to take care of land surveys, investigation of water powers, engineering, inspection and research. L. V. Rorke, for twenty years a member of the Surveys Branch, was promoted to the new post.³¹

Now the Department had three Deputy Ministers, in the persons of Cain, Zavitz and Rorke. For the next few years all of them signed the Annual Report presented through the Minister (Finlayson) to Parliament. However, Cain, being in charge of the finances, was the senior and in effect the controlling deputy minister. In 1929 the Department, somewhat belatedly, celebrated its centenary, which it reckoned to date from the appointment of the Hon. Peter Robinson as Commissioner of Crown Lands and Surveyor General of Woods and Forests in 1827. A banquet, held in the Parliament Buildings, was attended by 140 staff members as well as by former ministers, retired senior executives and old-timers. Both the latter, says the Annual Report, "felicitously indulged in retrospect and prophecy, dwelling upon the tremendous growth and recognized importance of the Lands and Forests, and the need of a continuity and stability in administrative service."³² In the light of oncoming years this "prophecy" has a somewhat ironical ring. For the Department was about to enter on a period not of continuity and stability, but of great uncertainty and upheaval, caused by circumstances far beyond its control.

For the first time in many years, the Annual Report for 1930 made reference to "the general financial oppression"³³ which was affecting "the market for forest products" and causing curtailment of output in the mills and reduction of bush operations in the coming winter. At the outset it was hoped that the setback would be temporary; but instead, it grew worse year by year. "Never in the history of the great forest products industry", said the following year's Report, "has there been more widespread discontent . . . The country-wide economic depression indubitably has left its mark upon the lumbering and logging business that has been so long nurtured in its own world of romance and adventure. The glamour surrounding the woodsman developed in him a buoyancy and confidence in his country and a determination to keep the wheels turning and the chimneys smoking. Lately, however, the usual confidence and optimism so characteristic of members of the trade have given way to forebodings, uncertainties and indecisiveness."³⁴ The lumber yards were full to overflowing with unsold and unsaleable lumber. Paper warehouses bulged with unsold rolls. Builders and other users of forest products were drawing in their horns. Woods operations were drastically curtailed, and a Departmental memorandum indicated that during the winter of 1931 there were practically no logging operations in the Rainy River district.³⁵ The sale of timber limits fell off sharply from fifty to thirty; and the output of pulpwood was reduced by one-fifth.

In the summer of 1932 the meeting of the Imperial Conference in Ottawa raised hopes that something could be done to help Canada's lumber trade with Britain.³⁶ The Canadian Lumbermen's Association submitted a brief describing the depressed condition of their industry, and asking for a Canadian preference of 20% in the British tariff on lumber and timber products, as well as an embargo on Russian exports of cheap timber to Britain. The outcome was the grant of a 10% preference, and some reduction of the quota of timber imports from Russia into Britain. However, much of the gain was offset by the imposition by the United States of a tariff of four dollars per thousand feet on lumber imports from Canada.

By this time the Department's revenue from timber had fallen from a record high of over four million dollars in 1930 to three million dollars in 1931, two millions in 1932 and little more than one million in 1933.³⁷ Already concessions were being made to the hard

hit operators, first by giving them permission to spread payments of Crown dues over a longer period without interest charges;³⁸ and, when this proved insufficient, by reducing the payments outright by sixty per cent.³⁹ In the following season reductions were again offered, averaging eighty per cent of the Crown dues, in cases where a bonus had also to be paid, and fifty per cent where only simple dues were payable. Pulpwood operators were conceded a reduction of Crown dues of forty cents a cord on spruce only.⁴⁰ But all these concessions were considered but as "small favours" by the industry, which clamoured for a substantial cut in the bonus charges, on the ground that these had been raised to extravagant levels by boom-time bidding.⁴¹

Naturally during these years the Government made drastic retrenchments in the expenditure of the Lands and Forests Department. Research projects were halted, forest inventory work reduced and, most serious, the fire-ranging budget was cut by four hundred thousand dollars during 1933.⁴² As a result of these economies Forest Protection lost the services of one forest assistant, two fire inspectors, one chief ranger, twelve deputy chief rangers and one hundred and sixty-four rangers. Reforestation temporary staff had their summer work curtailed; land and timber agents had their salaries cut; and there was a general slowdown in the purchase of new equipment and a postponement of new undertakings. Yet despite all this retrenchment, the Department's expenditure was reduced only to just under two million dollars in 1933, a figure which was still over three hundred thousand dollars in excess of the year's revenue.

In the midst of this crisis the Conservative Government, which had been in office for ten years, was forced to call a general election. Mitchell W. Hepburn (or "Mitch" as the electorate came to know him), the vigorous young leader of the Liberal Opposition, found much to complain about in the administration of the Lands and Forests Department. In the squalor of the depression, an attack on government extravagance was a potent campaign weapon; and Hepburn swelled with indignation when he revealed that the Conservative Minister, William Finlayson, had made personal use at his own summer cottage on Lake Temagami of a mahogany powerboat built for the Department and that over four hundred thousand dollars a year was being spent on the Department's "Air Force".

The forests no longer produced revenue for the Province, they were an expense. The Department, he told voters, "not only eats up all the revenue from Lands and Forests, but . . . an additional sum is levied on the people by direct taxation in order to make up the deficit." Gross mismanagement had characterized the Conservatives' forest policies, so that vast tracts of valuable timber and pulpwood lands lay monopolized and unused while the industry stagnated.⁴³ To these thundering denunciations the Conservatives could only reply by dredging up the old 'wet' bogey, and suffered overwhelming defeat at the polls.

On taking office early in July, 1934, Hepburn lost no time in appointing a new Minister of Lands and Forests, in the person of the Hon. Peter Heenan, then in his sixty-first year. Heenan was an ambitious Irishman from Country Down, Ireland, who on coming to Canada in 1902 had settled in Kenora, where for a time he drove a locomotive for the C.P.R. Entering politics via the trade union movement he was elected Labour MPP for Kenora, and in 1919 joined the United Farmers' coalition. After its collapse he transferred to federal politics in 1926, served as Labour Minister under Mackenzie King and helped to push through the first Old Age Pension legislation. Becoming restless again after 1930, he returned to the provincial scene, regained his old seat at Kenora, and sought the Lands and Forests portfolio in the Hepburn Cabinet. Hepburn could hardly refuse this influential Irish Catholic politician who represented northern Ontario in his Government and brought to it much-needed experience, political and administrative.⁴⁴ Unfortunately, Heenan was much more effective as a politician than as an administrator.

It was his task to overhaul the Lands and Forests Department and reduce its bulk and cost to the Province. He was also expected to provide a fair share of "the spoils of office" available to hungry Liberals who had been out in the political wilderness for many years. One of his first actions was to appoint, at the beginning of September, his own son, Peter F. Heenan, to the post of Secretary to the Minister and Departmental Secretary. A few weeks later, he picked out another deserving party politician for reward. Frederick Noad was a local journalist who had gained some reputation as a writer in Toronto *Saturday Night* and had written articles and drafted speeches for the leading Liberals, such as Roebuck, during



HON. PETER HEENAN, *Minister of Lands and Forests, Ontario, 1934-41*



HON. MITCHELL HEPBURN, *Premier of Ontario 1934-42*

the 1934 campaign. Although he had had no previous connection with Lands and Forests, Noad was sent by Heenan in July on a tour through the Department's district offices, to interview foresters, rangers and airmen and collect samples of their opinions on the best way to improve the administration. He returned with a dossier which indicated that many of the middle-ranking staff who did not possess the special qualifications of foresters thought they could do a forester's job just as well or better than the existing incumbents. Noad used these opinions as a basis for proposing extensive economies in the reorganization of the Branch.⁴⁵

At this time the Forestry Branch was in a somewhat vulnerable position. Its rapid growth over the past dozen years had not been accompanied by any close integration with the other branches of the Department. In particular, forestry had remained separate from timber administration; with the result that the foresters were not only labelled as relatively well-paid technical 'specialists', but also suspected of being deficient in the kind of practical experience gained from the rough and tumble of woodsman's work, as exemplified among timber cruisers, scalers, etc. There may also have existed some jealousy, on the part of the "old-timers" who owed their appointments to traditional patronage and their promotions to seniority, of the easy progress by which forestry graduates could more rapidly secure posts of wide responsibility in the districts. It is said that Noad developed a rule-of-thumb method of his own for distinguishing between the 'clean-shirt' men he found sitting at their desks in the district offices and those who were out working in the bush.

On August 1st, Heenan rewarded Noad by appointing him Deputy Minister of Forestry in place of E. J. Zavitz, whose twenty-two years of pioneering work in building up the Forestry service did not prevent his abrupt relegation to the position of Provincial Forester (without loss of pay). At the same time Noad was given a colleague in the person of H. C. Draper who, since the retirement of Titus in 1931, had acted as Solicitor to the Department, and was now moved over to the Forestry Branch with the title of Assistant Deputy Minister of Forestry. Draper was both a personal friend of Noad and a useful link, through his private financial speculations, between Heenan and various outside business interests. Noad himself, who has been described by those who knew him as "a small

insignificant-looking man with a bitter tongue", had but one function to perform, which was to thin out the personnel of the Branch, at headquarters and in the field, as a measure of economy.

This he proceeded to do in a harsh and clumsy manner that caused great offense and no little fear. During the nine months of his brief period of authority in 1934-35 he dismissed outright fourteen of the forty-one district and assistant district foresters, and changed most of the other senior positions in the field by promotion or demotion.⁴⁶ In fact, only eight officers were left untouched. Noad was also responsible for several resignations and superannuations which, it is estimated, brought the total number of forestry graduates affected to about twenty. The dismissals, coming at a time of trade depression when alternative employment was difficult to obtain, had a demoralizing effect on the service as a whole. No one felt safe in his job, and all feared that the axe might at any moment descend on their particular head.

The brief and controversial reign of Noad is remembered as a "traumatic experience" by most of the foresters who survived the purge.⁴⁷ Numerous anecdotes and episodes are still current in the Department concerning his regime. Noad's main weakness was his limited knowledge of the Department and its work, which undoubtedly led to his undoing. His office and desk became loaded with files covering matters on which he was unable or hesitant to make a decision. Yet he had his own ideas about how business should be done, since just before leaving his office upon resignation he is reported to have said that "apparently the Department is not interested in having anyone around who knows anything about how to operate it."

Legend ascribes Noad's fall to the direct action of the Premier. In May, 1935, Peter Heenan went on a business trip to Europe, during which time Hepburn took personal charge of his Department. Noad was in the habit of bringing to the Minister's desk regular reports that he had prepared, giving lists of departmental personnel whom he thought could be dispensed with. On the last occasion the Premier received the report, read it through without comment, crossed out the list of names of persons suggested for dismissal, turned the page over and wrote one new name on the back – then handed it back. The name was that of Frederick Noad himself, who was then and there fired! H. C. Draper lasted longer and continued

to administer the Forestry Branch until February 1938, when he resigned.

The forestry dismissals were the most drastic, but by no means the only changes made in the Department's staff for economy's sake. On coming into office in 1934 the Hepburn Government had set up a Royal Commission to enquire into the workings of the Provincial Air Service.⁴⁸ As has been indicated in Chapter Twelve, the Service's director, Roy Maxwell, was held responsible for various extravagances and lax practices uncovered by the Commission, and was dismissed from his post in favour of Hepburn's protégé, G. E. Ponsford. In February, 1935, Surveyor General Rorke was superannuated from his post, which carried deputy-ministerial status, and kept on for two months on reduced pay.⁴⁹ Early in the following year he was succeeded as Surveyor General by C. H. Fullerton, who was transferred from the Department of Northern Development.⁵⁰ Other important changes, affecting particularly the lands and timber field staffs, were the work of Walter Cain. By this time, with improved communications and more centralized administrative control, the ancient position of local Crown timber agent was becoming obsolete. Between 1934 and 1936 the number of timber agents was steadily reduced from twelve to zero, partly through superannuation, but still more by reclassification of forestry personnel as lands agents. In the same period five lands agents were dismissed, three were reclassified as foresters and three others as homestead inspectors. The homestead inspectors, too, were gradually reduced in number from a dozen in 1932 to less than half that number at the outbreak of World War II in 1939. By the latter date, however, several of the foresters dismissed in 1934-35 had regained their employment in the Department, though sometimes in a different capacity.

By 1934 the tide of depression in the timber trade had begun to turn; and during the next five years the revenue of the Woods and Forests Branch of the Department of Lands and Forests showed a steady recovery from the low trough of 1933. In spite of dues remissions and bonus reductions, the revenue rose from \$1,309,000 in 1933 to \$2,475,000 in 1935-36, \$2,810,000 in 1936-37 and \$3,507,000 in 1937-38.⁵¹ In comparing these figures, it should be noted that in 1935 the fiscal year was changed to run from April 1 instead of November 1.

On the expenditure side, the economies effected during the first four years of the Hepburn régime produced a very considerable reduction in the sums spent on the forests. In 1934 the cost of fire ranging, forest ranging, forest research, insect control and reforestation combined had amounted to around \$1,569,000, which was seventy one per cent of the total expenditure of the Department.⁵² By 1938 this figure had fallen to around \$1,313,000, or only sixty-four and one half per cent of the Department's total expenditure.⁵³ To a large extent the forest protection service bore the brunt of these economies, its budget being cut by nearly fifty per cent during the period. The year 1935, the first of the new Government, was one of exceptionally low fire hazards; consequently the effects of the dismissal of the foresters and the stand-still policy adopted regarding purchase of fire-fighting equipment, were not felt. However, the 1936 season, being "the worst on record in the Province,"⁵⁴ caused a strong reaction in favour of resuming expenditure on equipment and re-hiring of trained foresters. But before the ground that had been lost could be fully recovered, the outbreak of the second World War introduced new complications, in the form of price controls and shortages, that again held up progress.

Walter Cain, who had concurred in the dismissals of 1934-35 without actively promoting them, came safely through the stormy period to emerge with a firm control over the administrative machine, but little influence on policy. In the Annual Reports for 1936-37 and 1937-38, he briefly described the structure of the Department's organization as it then was. It consisted, he says, of the Main Office (which included the Executive Officers) and the Lands, Accounts, Records, Provincial Land Tax, Forestry and Woods and Forests Branches, each under a chief clerk; also the Survey Branch, under the Surveyor General; "all of whom, with the various field offices and staffs engaged in the work of administration are under the Chief Executive Authority of the Department", i.e. himself.⁵⁵ "The field organization", he continued, "is a part of the whole and responsible through the Branch Head to the Deputy Minister. The territory is divided into twelve great districts for forest management, and each District has its local office under a District Forester. In addition to these offices, it is necessary, for the convenience of the public, to maintain offices for Crown Land Agents, where the work cannot be economically performed in the

District Forester's office . . . In addition, the field organization includes the Forest Stations at St. Williams, Midhurst and Orono, the Air Service with headquarters at Sault Ste. Marie and the Radio Operating Stations, chief of which are at Kenora, Sioux Lookout, Red Lake and Pickle Lake."⁵⁶

On the surface, then, the Department appeared to have regained its normal stability. But the general outlook remained threatening. The timber industry continued to feel the effects of the depression. Serious labour troubles had broken out in northern Ontario among the bushworkers and mill hands. Several of the leading pulp and paper companies, such as Lake Sulphite and Abitibi, had gone into liquidation or were under reconstruction. With the approval of the Ontario and Quebec Governments, the manufacturers of newsprint had reached an agreement among themselves to limit their output and cooperate in the distribution of their product. Although the Hepburn Government secured a fresh lease of life in the General Election of 1937, there remained a strong undercurrent of dissatisfaction with the Government's forest policies and their operation through the Department. All this came to a head in 1937, with the election by the provincial Conservatives of a new leader, Colonel George Drew, who at once showed his aggressive tendencies.

PART IV: MANAGING
NATURAL RESOURCES,
1941-1967

17

POLITICS AND TIMBER

1934-1943



“We will make our natural resources available to enterprise,” Hepburn had promised the people of Ontario in 1934. “We will revive our forest industries and restore the Provincial revenues.”¹

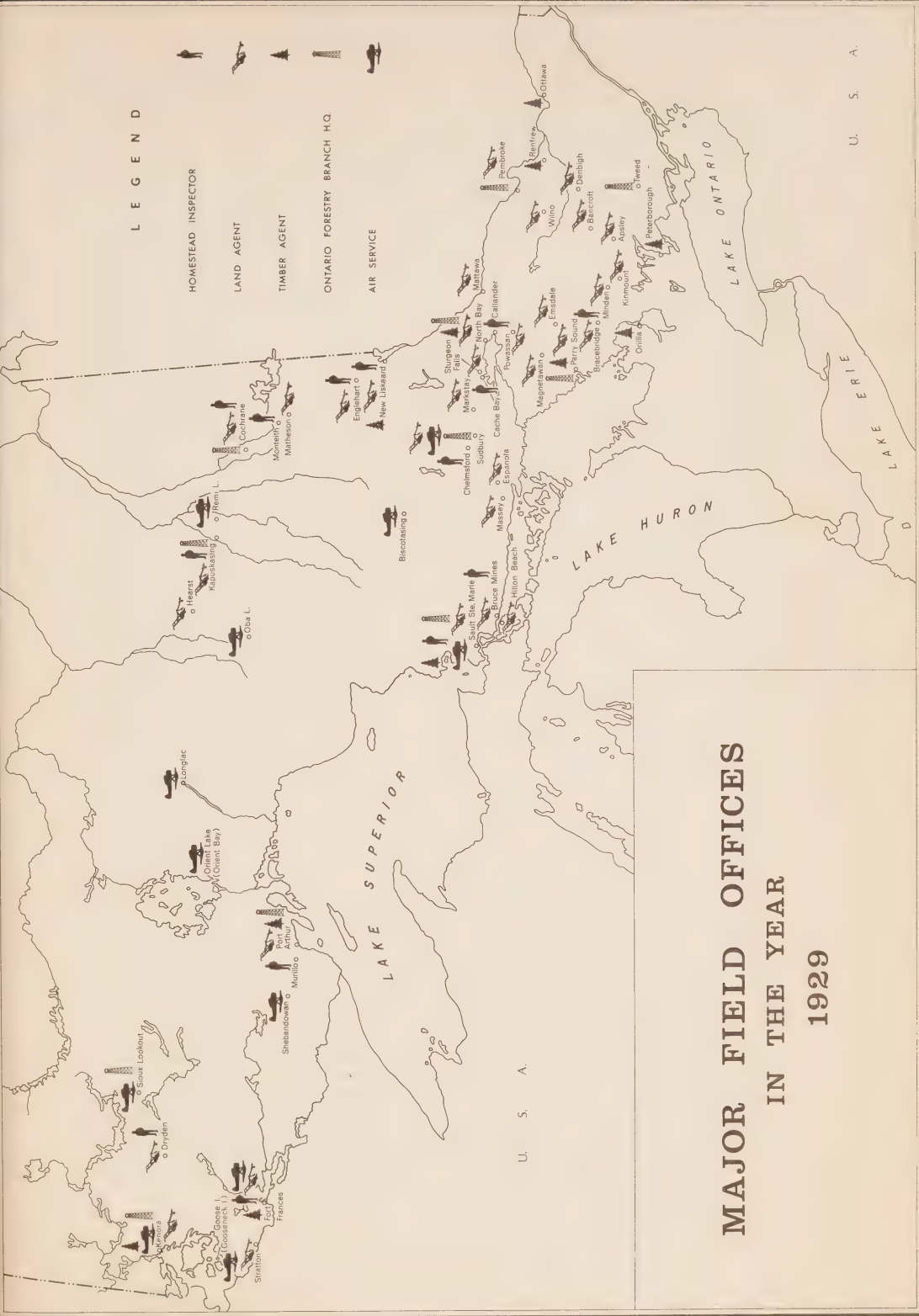
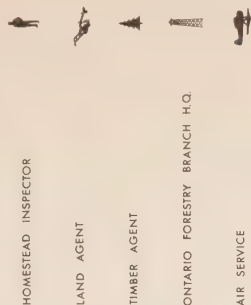
It was accordingly hardly surprising that Hepburn’s newly elected Government should have been instantly approached by a delegation of lumbermen clamouring for concessions. With Hepburn in the chair as Acting Minister, the Department heard again the demands the lumbermen had been pressing for the past four years. As a result of the discussions “important concessions were granted to the industry in the way of reductions, not only in Crown dues, but also on bonuses . . . on a mutually co-operative basis . . . and only where the operator undertakes to place a certain quota of workers

in the bush, on the drive and in the sawmill.”² The reasons for the concessions were explained in a memorandum incorporated into the Order in Council authorizing the measures. First and foremost, the reduction of stumpage rates would create employment for ten thousand unemployed bushmen, many of whom were on direct Government relief. Reviewing the causes of the depression and the former Government’s policy of reducing Crown dues only, the memorandum pointed out that such reductions had been far from what the operators sought.³ They had wanted cuts in the bonus charges, which formed the greater part of the lumbermen’s debts.⁴ On September 11th, 1934, the dues and the bonuses above three dollars on red and white pine were reduced by one half. Similar reductions prevailed on the other species.⁵

The Liberals also had to devise a solution to the serious labour problems which had developed in northern Ontario lumbering communities. The severe depression, coupled with the fierce bitter winters and growing labour unrest, served to spark a series of vicious strikes which, since most of the discontented were displaced lumbermen or mill workers, directly involved the Department. The trouble at Kapuskasing was typical of the general unrest. There the Spruce Falls Company had introduced mechanical equipment, such as haulage tractors and truck haulers, and had begun to cut on a year-round basis. The workers, led by alleged “outside organizers”, saw sinister implications in these innovations. The cutters and mill workers struck and were soon joined by Abitibi workers at Smooth Rock and Iroquois Falls.⁶ The companies argued that the picketing men were not legitimate strikers; they were malcontents whom the company did not wish to employ in the new small camps made possible by continuous operations. The men in the camps, they said, were quite content; it was the men outside, not likely to be re-employed by the company, who were agitating “to shut our camps down, forcing us to wait until Fall, when it will be essential for our wood supply that we put large crews into the bush; and at this time the men will go into the bush upon their own terms and conditions only.”⁷

The Kapuskasing strike eventually petered out, but the Government felt compelled to make provision for the future.⁸ The first step taken by Heenan and Hepburn was part of the bonus reduction bargain negotiated with the lumbermen. In return for the bonus

LEGEND



MAJOR FIELD OFFICES IN THE YEAR 1929

U. S. A.

concessions and in an attempt to prevent a recurrence of violence, the Department demanded that the operators pay fair wages, make reasonable charges for goods sold in the camps, and comply fully with the regulations of the Department of Health.⁹ To strengthen its hand the Woodsmen's Employment Act was introduced to give the Minister power to investigate conditions in the bush camps either before, during or after a strike, so that disturbances and strikes could be settled, or even better, avoided.¹⁰ Two inspectors were commissioned to investigate such questions as computation of wages, hours of work, food, charges for supplies, deductions for services, assessments, camp quarters, contracts, and labour conditions, and were empowered to act as conciliators.¹¹ The Act provided an effective threat and was a significant extension of Departmental authority into the area of labour-management relations, since it stated that all those who acquired the right to cut Crown timber must be responsible to the Crown for anything done or required to be done during lumbering operations.¹²

The settlers who cut pulpwood from patented lands were also caught in the squeeze as the companies cut costs. When reduced prices for pulpwood created bitterness between settlers and companies, Heenan introduced in 1937 the Settlers' Pulpwood Protection Act, which required each company to supply information regarding prices and details of dealing with pulpwood suppliers to the Department. The Minister was empowered to fix pulpwood prices and control the methods of measuring. An inspector of settlers' pulpwood was appointed, though no regulations were created under the Act. The difficulties it had been introduced to handle were settled without the exercise of its coercive power. The Minister went to several large companies that purchased settlers' wood and after a few "round table discussions . . . (the companies) to their credit voluntarily increased the price to what was deemed fair." During 1939 these companies felt that the reduced market made necessary a reduction in the price to be paid to the settlers, but once again Heenan managed to maintain the previous year's level of prices.¹³

The need to put men to work prevailed over all other considerations. The huge pulp companies had fallen into receivership. Thus Abitibi's six mills were either closed or running with skeleton crews. In 1934 Backus' empire collapsed completely, and his mills struggled on in receivership operating at under fifty per cent of their capacity.

At Espanola, Sturgeon Falls and Fort William the mills were boarded up; and throughout the north the listless ranks of unemployed grew longer. The Lakehead was particularly hard hit; though in 1933 the Conservative Government, hoping to create jobs, had quietly reversed its long-standing policy of prohibiting the export of pulpwood. The Minister, Finlayson, pointed out that the Crown Timber Act provided that the Government could lift the prohibition at its own discretion. Accordingly, he authorized operators at the Lakehead to export as long as the wood was not intended for manufacture into newsprint in the United States. Cutting and peeling must be done by local labour; and the wood could not be shipped until clearances had been issued indicating that the dues and the export fee of twenty-five cents per cord had been paid. Hepburn continued the policy designed to create labour opportunities and keep men off relief.¹⁴ Beside the step already taken, dues on spruce pulpwood for domestic and export consumption were reduced and the export fee removed. Both governments thus expressed the conviction that "the putting of men back to work and the saving of their morale" was more important in the existing difficult circumstances "than the real or apparent losses in certain lines of revenue."¹⁵

The Forest Resources Regulation Act of 1936 was the last and most drastic step taken by the Liberals to get the forest industries back on their feet. It empowered the Minister to negotiate with companies holding undeveloped areas that had been acquired years ago but had been held merely for book inventories and for building up alleged assets. Under the slogan "get the men to work", plans were made to re-allocate limits to those who could cut the timber. With this authority, Heenan bargained for the return to the Crown of several thousand square miles of timber lands formerly held out of production,¹⁶ and proceeded to the next step in the programme – to dispose of the lands to new developers. The Government's bargaining position was strengthened by the fact that most of the companies it was dealing with were in receivership and therefore in no position to resist; but it was jeopardized by the hasty promises of a new group of speculators and exporters, who seized the opportunity to make fast money while the export market was still open. The bankrupt Great Lakes Company had its holdings reduced from eight thousand, eight hundred and ninety square miles to one thou-

sand, four hundred and ten square miles, in the most extensive of the re-allocation schemes.¹⁷ A number of companies were interested in the limits which, with other recovered areas, were disposed of in a series of agreements concluded in 1937. Some of these, such as the Lake Sulphite contract, stipulated that a pulp mill should be constructed; but others, such as the General Timber and the Western Pulp and Paper agreements, were strictly export agreements designed to put men in the bush, though mill construction was mentioned without being made mandatory. The re-allocation aroused some criticism; but the temporary boom in the industry and the obvious political appeal of the measure kept the Opposition from making a strong attack on it.¹⁸

In 1937 the Government called a General Election, confident that these policies, along with its other measures, would ensure its re-election. Since 1934 the number of operators had risen from one hundred and forty-nine to two hundred and twenty-seven; camps had increased from two hundred and eighty-two to five hundred and fifty-seven; and the number of men employed in forest industries had doubled, from eleven thousand one hundred and eighty-four to twenty-three thousand one hundred and forty in 1936.¹⁹ Four new mills were promised and business appeared to be on its way to recovery. The Liberals had provided work instead of relief,²⁰ but these gains had been made at the expense of home industry and behind closed doors under compromising circumstances. The Liberals were therefore open to suspicion, and to charges of using power arbitrarily and abandoning the old "development" policy. In reply they claimed extenuating circumstances and pointed to their employment record; but the difficult years were passing and what had appeared necessary in hard times resembled patronage and lax administration in better ones. The Conservatives gained six seats, five of them from the Liberals.

The pulp and paper industry had made a remarkably speedy recovery from the chaos, the suspicion and the mistrust which had existed prior to 1936. Since 1926 it had been plagued with an excess capacity which created an unbalanced distribution of tonnage and competitive price-cutting. This was caused by "a struggle . . . between the united and highly organized group of purchasers on the one hand, and an utterly disorganized group of vendors on the

other."²¹ Through a series of interlocking contracts the paper producers were committed to sell newsprint at a standard price – the lowest price the buyers could get. When one producer, anxious to keep his mill running, agreed to reduce his price, all his competitors would have to follow suit. By 1935 newsprint was selling at forty dollars a ton. On their own initiative, but with Government support, the newsprint manufacturers formed a loose association to examine the situation. The outcome was a scheme known as "proration", whereby the total market tonnage was distributed amongst the manufacturers according to a certain formula. The agreement depended for its success on the continued unity of the manufacturers and the co-operation of the Quebec and Ontario Governments, which would have to agree not to approve the installation of additional newsprint facilities. Hepburn appears to have concluded an informal pact on the subject, first with Taschereau and then with Duplessis in 1936,²² but the industry's unity was more easily preserved in hard times than in good. Some companies, such as Ontario Paper and Spruce Falls, producing exclusively for the closed market of the *Chicago Tribune* and the *New York Times*, argued that the production-distribution scheme did not apply to them. A second complication arose in 1939 when Great Lakes Paper, recently out of receivership, allegedly reverted to the "old cut-throat scheme which damned the whole industry in Canada," by agreeing to supply a Detroit publisher at less than market price.²³ The first efforts to persuade the company to comply with proration proved unsuccessful; and Heenan and Hepburn toyed with the idea of using the authority given them by the Forest Resources Regulation Act. Heenan reminded the Premier that Duplessis had successfully coerced a Quebec renegade, and suggested that at the next Cabinet meeting "we will have to either keep our hands off and let the industry wreck itself or make the companies who are disregarding the regulations toe the scratch." But the Act was an ultimate weapon and both feared the criticism that would come from the Opposition and from industry if it were used. Not until five months later (October, 1938) did Heenan threaten to use the power the Act gave him. A change in the company's management followed and negotiations were reopened; but in July, 1939, Heenan and Hepburn, still dissatisfied, imposed a penalty that amounted to a fine of five hundred thousand dollars. Further negotiations led to promises

by the company and the penalty was removed in December, 1939. A similar dispute occurred between the Government and the Minnesota and Ontario Company.²⁴

The War changed the basis of both disputes before they could be satisfactorily resolved; but in the meantime they contributed to a general feeling of dissatisfaction with the Government's timber policy. This dissatisfaction was further encouraged by the competition between two powerful Lakehead lumbermen, C. W. Cox and Eddie Johnson, which created scores of legends of violence and deception and provided the Opposition with ample ammunition for its attack on Liberal timber policy. Both men had close ties with the Government which, as time passed, seemed less and less capable of controlling them.²⁵

In 1938 the year-old Lake Sulphite Company went into receivership. Promoted by R. O. Sweezy, a Montreal financier, the company, in what had seemed the most promising of the 1937 agreements, had undertaken to build a two-hundred-ton-per-day bleached sulphite mill at a minimum cost of five million dollars. When the company collapsed, the mill was only partially completed and the company was more than one million dollars in debt. To some extent, unexpected difficulties in floating a bond issue were responsible for the collapse; but it was also rumoured that the funds raised from the sale of common stocks had been foolishly spent. Despite the embarrassment the affair caused Heenan, he retained his faith in the operation, pointing out to Hepburn that "if left alone from political manoeuvring the company will get itself into a position to carry on the plant and will have one of the best sulphite plants in the world."²⁶ Nevertheless, the contract remained unfulfilled and the Government was left to pay for its uncritical support. In an attempt to clean up the remnants of the fiasco, it was prepared to come to exceptionally favourable terms with any company that would take over the contract. Eventually, the Brompton Company of Montreal took over the contract in 1942 at less than Crown dues.²⁷

This spectacular collapse focussed public attention on forest policy; and a growing uneasiness, never entirely dormant during the depression years, soon became manifest. The Department, in attempting to create stability, had informally policed the industry since 1934; and this, together with its handling of the 1937 re-allocation, had alienated important segments of the forest products

industry.²⁸ Professional foresters in Government and industry, through the Canadian Society of Forest Engineers, expressed concern that no well-articulated forest policy had been established on some of the more outstanding problems. The northwestern section of the Society eventually reached the point of demanding that the body publicly deplore the Government's attitude and suggested that "the present policy (or rather lack of true forest policy) be thoroughly overhauled by competent foresters and economists," to establish a "qualified, non-political, non-partisan forest service vested with full authority to administer all publicly owned forest lands in Ontario in the best interests of the people of Canada."²⁹ In addition, several interested publicists such as Jack Auden and J. C. W. Irwin, a non-practising forester, began criticising the policy in public.³⁰

Curiously, one of the first to lead the attack was the one man who seems to have benefitted most from the Government's policies. C. W. Cox had always been critical of the Department and particularly of the Minister; and at one point Hepburn must have felt that his criticisms had some substance, for in December, 1936, he appointed Cox Minister without Portfolio and loosely hinted that Cox would head an investigation of Tory timber policy between 1923 and 1934.³¹ The suggestion brought an immediate reaction from the party officials in Cox's riding. Charles A. Wilson, President of the Fort William City Liberal Association, wrote to the Premier saying that perhaps an investigation was needed, but "not with Cox mixed up in it . . . To the people up here, Cox will have too much to answer for . . ."³² The investigation never materialized and Cox continued his criticism for several years; but though his words did not change, less weight was given to them as time passed. Now, with new maps, charts and denunciations, he proclaimed the need for home manufacture instead of the export policy he had long promoted, and flourished a portfolio of cancelled cheques acquired when he had been treasurer of the old Conservative Association which, he insinuated, would tell a black tale.³³

Within the Department two factors contributed to the public impression that a probe should be ordered. First, inadequate communication with the public kept many people from understanding that the majority of the men holding responsible positions genuinely believed that the policies they had initiated or were enforcing

and the agreements they had made were for the public good. The early 1930's had been a period of great difficulty and many, particularly the Minister, prided themselves on the measures which had been taken. A further factor was the inadequacy of the departmental machinery. The Department was moving out of a period of enforcement of regulations into a period of creative management, in which tools such as the Forest Resources Regulation Act were necessary instruments, though they were still too crude and blunt for effective use. The Department to some critics appeared to be rotten to the core. It was not. It was simply encumbered by a structure adequate in the 1890's, but in the 1930's overloaded with responsibilities and functions unheard of forty years before.

Early in 1939 the newly elected leader of the Conservative Party, George Drew, gave notice that he intended to make forest policy an important issue in the coming session of the Legislature.³⁴ Soon afterwards he endorsed the resolution of the North Western Ontario Associated Chambers of Commerce requesting an inquiry into the causes of the stagnation of the forest products industry.³⁵ On March 8th, the first day of the session, Heenan told the press that no commitments would be made to the Abitibi Pulp and Power Company until a reorganization of the company (which had been in receivership since 1932) satisfactory to the Government had been achieved.³⁶ Since timber limits were one of the company's most valuable assets, no sound plan of reorganization could be effected without Government co-operation. Two days later, Premier Hepburn announced the passing of an Order in Council extending the 1937 agreement for a year, but giving the Government the right to terminate it with six months' notice. By itself, this step appeared to be an attempt to encourage speedy reorganization; but it was accompanied by a statement indicating approval of a plan to reorganize, by means of foreclosure, something that was detrimental to the junior security holders.³⁷ While the price of the junior securities slumped, the bonds soared; there was an outcry in financial circles.³⁸

This gave the former Securities Commissioner his first parliamentary confrontation with the Premier.³⁹ In a three-hour debate, Drew questioned the Government's wide power over timber resources and its capricious use under such legislation as the Forest Resources Regulation Act. He deplored the Government's playing such a partisan role in the business community without apparent justifica-

tion. Criticising the Government for financial naiveté, he demanded production of all papers relating to the rights and reorganization of the Abitibi Company since January 1st, 1937. Hepburn's response was weak and he permitted the papers to be tabled.⁴⁰ The question of how the Department had administered the timber resources of the province was now open. Soon the Lake Sulphite issue was reopened, and on March 17th Leopold Macaulay, Drew's bench-mate, moved to question the Minister on the operations of the Department.

The issue was suspended for a month; but on April 14th, Drew moved: "That a Select Committee of this House be appointed to investigate, inquire into and report on all matters pertaining to the administration, licensing, sale, supervision and conservation of natural resources by the Department of Lands and Forests".⁴¹ Hepburn immediately agreed to this request, stating that the Liberals had put the Department on a "paying basis", transforming it from one which had lost money in 1934, to one which earned a surplus of two and one half million dollars in 1939.⁴² Rather than being ashamed, the Liberals would appreciate the opportunity of demonstrating how well they had operated the Department.

The personnel of the ten-man Committee, as announced April 27th, 1939, included three Cabinet Ministers, the leader of the Opposition, and most of the important members from northern Ontario. The Hon. Peter Heenan was not at first included on the Committee, but was subsequently added to replace the Hon. Colin Campbell, who had enlisted in the armed forces by the time the hearings began in January, 1940. Hon. Paul Leduc was Chairman; Hon. H. C. Nixon was the Government's chief representative; J. M. Cooper acted as counsel to the Liberal Party, and George Drew as the prosecutor.⁴³

By the time the Committee met, however, it had undergone a curious metamorphosis. Drew was expected to establish the guidelines of the investigation: he had wanted the Committee; he should particularize. He pointed out the "very clear necessity for some defined policy on the part of the Department," and expressed the hope that a long-range programme for protecting the resources managed by the Department could be devised. Drew was determined to show that agreements had been made and limits reallocated in a haphazard and unsystematic fashion. He wished to examine specific cases and to go into the general question of the proper extent of Government interference in the private sector of

the economy. The War, too, raised important questions; timber was an important wartime resource and reconstruction had to be considered. To all this J. M. Cooper agreed, adding that the Committee's primary task should be the establishment of a permanent timber policy.⁴⁴

Drew proposed to examine the Minister and the Deputy Minister in order to establish a suitable foundation for the inquiry. He would have them set out the general policies governing Departmental activity and provide the Committee with a rough idea of the Department's organization and operational procedure. Drew then expected to scrutinize the 1937 agreements in order to gain a clearer picture of how the Department alienated resources and of the controls it maintained over them. Finally, experts on particular issues such as export and proration would be heard.⁴⁵

A number of critics had assumed, from the wording of Drew's motion, that he intended to conduct a searching and much needed re-examination of the Department; and even the harmony of the first few meetings did not dim these hopes. However, as witness after witness appeared at the Committee's thirty-two hearings between January and May, 1940, it became clear that a far different course was being followed. All the members of the Committee seemed to agree that an extensive research programme was necessary, both to assure the resource's renewability and to help the industry compete in world markets. They all assumed that a core of highly trained men was a necessity and that "good forestry practice" would be the rule throughout the timber lands; but none asked whether enough trained men were in the field or whether they had sufficient authority to insist that the companies apply good forestry practice. Nor did they ask whether the Department's structure was capable of assuming the burden of enforcing modern forest management. Furthermore, when one witness stated that the foresters were underpaid and were too few in number, he was told that his statements were "offensive". This witness, J. C. W. Irwin, was the only person who attempted a serious critique of the Department's organization and administrative structure. He received no encouragement from the Committee, which generally treated him as a crank, and was asked only three questions by the Opposition members who had been so anxious to investigate the Department.⁴⁶

But Irwin's testimony was not that of a crank. His chief fault seemed to be that he had adopted a cause and had ridden it too hard in the press and in public lectures. His testimony revealed that he was well informed and familiar with the Department's operations. In fact, a number of his recommendations clearly had the private support of Departmental personnel and were implemented after the reorganization of 1941.

He presented a thirteen-point series of recommendations which included paying the men salaries commensurate with their training and responsibilities, freeing them from political interference, hiring more graduate foresters and supplementing them with a larger force of less qualified men trained at a ranger school similar to the one later established at Dorset. He also suggested a public information programme, a detailed inventory which would enable the Department to insist that the operating companies follow sound management plans and the building of forest access roads. Few of these ideas failed to become policy in later years. However, the Committee, as Irwin later commented, "side-slipped" when it came to the point of investigating the details of the Department's shortcomings.⁴⁷

Instead, the Committee concentrated on issues rather classified as Government policy than on issues of Departmental administration. These were proration and the Forest Resources Regulation Act, which had been introduced to implement the policy of exporting pulpwood from Crown lands; the agreements of 1937; and the general condition of the industry. Only one aspect of the Department's administrative policy, the method by which summer resort lands were disposed of, received extensive critical comment. The reports of the Committee reflected this preoccupation with major policy issues; though the minority report, written by the three Conservative members, argued that the establishment of a forestry Commission would eliminate many of the shortcomings pin-pointed in Irwin's testimony.

The majority report, submitted by the Liberal members, paid almost no attention to the Department's administrative methods except, in refuting the Commission idea, to state rather generally that the development of the Department had extended over many decades and that "routine, gradually evolved as the result of years of experience, should not lightly be disturbed."⁴⁸ It suggested that

efforts be made to foresee and plan for technological and social changes which would affect the forest industries; and it presented a number of general recommendations on timber policy that amounted to little more than the statement that a "sustained yield" approach to forest exploitation was a good thing. It applauded the Liberal Government's policy of permitting export of pulpwood from Crown lands and similarly found nothing to complain of in the proration policy which, it was thought, had lost much of its immediate relevance as a result of a wartime boom, but would probably be needed again after the War was over.

The report did make positive recommendations on the subject of a research and sales promotion agency, suggesting that the Department should immediately review the effectiveness of existing research facilities and, with the Quebec Department, devise a combined effort to harmonize the work of Government and industry in the field. Sales were best managed by the industry, which was advised to re-examine its sales and promotion methods and attempt to develop more active organizations. The report also recommended that ways and means be sought to reduce two of the industry's heaviest cost burdens – electrical power and transportation.⁴⁹

Turning to the Forest Resources Regulation Act, the report discovered in it three aims: to assist in making the proration policy effective; to enable the Crown to deal with timber limits held by companies in receivership; and to allow it to reallocate limits that were far more extensive than the companies holding them required. It was admitted that the wide powers granted by the Act might cause concern; but as these powers were considered necessary and as no-one had suggested that they had been misapplied, the Act should not be changed. The Government's attempts to reallocate unutilized timber areas under the 1937 agreements were on the whole laudable. It was unfortunate that some companies had defaulted; but at the moment "no benefit would or could accrue from a cancellation or forfeiture of the agreements . . . unless other parties are prepared to meet the obligations of development."⁵⁰ Cancellation would mean that the Government would lose the large sums being collected from the companies for fire protection and ground rent. Only if market conditions improved would cancellation be feasible.

The minority report, while more incisive than the majority report

and extremely critical of the Minister and some aspects of his Department, was also inclined to deal with broad aspects of Government policy and the over-all administration of forest resources. Early in the hearings Drew had detected in the industry a general insecurity which could only be rectified by removing the suspicion that political considerations, and not justice, prevailed in its relationship with the Government. This was one of the reasons why Drew felt that it was impossible to get specific recommendations from many extremely capable witnesses. They were afraid that evidence reflecting on the Department would prejudice the interests of their companies. Some even stated as much.

Drew suggested that the most serious factor contributing to this feeling was the Forest Resources Regulation Act. Its sweeping powers could be exercised without regulation and without right of appeal. The real purpose of the legislation he considered to be the punitive sections which assisted the Minister to enforce proration. Through these sections stumpage charges could at any time be increased in order to force the companies to observe the plan of proration; and two companies had in fact been forced to observe the scale of proration in this way. This was an extremely dangerous practice, he held, which should not be permitted to continue because, taken with the power to reallocate limits, it placed any contract between the Government and a company at the mercy of the Minister's whim. Drew suggested that proration could be enforced far more effectively by the federal Government which, under the Wartime Measures Act, could avoid the indirect controls adopted by the provincial governments and institute specific and outright controls.⁵¹

Drew had a poor opinion of the Minister, the Hon. Peter Heenan, whom he accused of taking "full responsibility for all major decisions, with little or no information before him from the well-trained experts in the Department. There is every reason to believe that the civil servants attached to this Department are well qualified for their positions, are conscientious and hardworking public servants; but it is clear that they have little or nothing to do with the decisions upon which the success or failure of the administration of the Department depends."⁵² The Minister, he continued, seemed to look upon silviculture and conservation as very minor considerations, in comparison with the possibility of making contracts dealing

with timber areas.⁵³ The minority report clashed with the majority's opinion on export. Ontario's forest resources were large enough to provide raw material for a number of diverse industries; but the type of export advocated in the majority report would destroy this potential.

A great deal of criticism was levelled at the 1937 agreements, which were believed to be nearly all in default. These agreements had been arrived at without any publicity being given to the fact that the areas concerned were open to development. Few records of the negotiations were available and as a result the Conservative members of the Committee felt that the Minister had followed his own whim in allocating vast tracts to such companies as the Pulpwood Supply Company and the Lake Sulphite Company. They argued that the most thorough reform of the Department would be useless if the Minister persisted in following such a course.

Timber administration therefore must be taken out of politics. This could best be done by placing the control of forest resources under a commission similar to the Hydro-Electric Commission, which would be the only body having the authority to make contracts for timber concessions. It should be completely divorced from politics and should operate under the direction of men having the highest type of business ability. It would be charged not only with administering and protecting the forest resources but also with planning for the future, so that the greatest possible amount of employment might be assured in the critical days following the war. By turning over control of the forests to such a body many of the problems facing the Department would be easily resolved. Since the proposed commission would also operate as a fact-finding body and as a co-ordinator of information, it would have the ability to reach decisions with full understanding of vital information hitherto unavailable.

To many people both the majority and minority reports were extremely unsatisfactory. They felt that the Committee had studiously avoided making a searching probe of the Department. It was understandable that the Liberal members should do this; but the role of the Opposition members was incomprehensible. At the outset of the inquiry the Opposition was probably eager to find scandal; but when the war came it seemed satisfied to elevate its expectation to laying down a thorough-going policy of timber utilization. This

may have been done in the interest of maintaining unity during the war crisis.⁵⁴ A reading of the minority report suggests, too, that the Opposition was convinced that the institution of a forestry commission would immediately correct all the faults that a thorough investigation could reveal. Hence such an investigation would be a waste of time.

When the inquiry had finished, the newspapers agreed that the Committee had approached its work in a calm and deliberate manner.⁵⁵ The *Globe and Mail's* comment that the Committee had been "strictly non-political" was typical of the press as a whole.⁵⁶ Just as the Committee itself had been preoccupied with major issues of government policy, so too the newspapers tended to concentrate their reports on the same issues, while overlooking shortcomings in the routine administration of the Department. They counted protraction as the chief issue;⁵⁷ but that had lost significance even before the reports were made public. Next, the papers felt a need had been shown for a more rational routine for handling resort lands. But this was not a serious indictment of the Department, but one that could be easily remedied.

Neither the newspapers nor the trade magazines were very perceptive in analyzing the testimony. *The Pulp and Paper Magazine* and the *Forestry Chronicle*, both of which generally provided very thorough coverage of developments in and affecting the industry, did not seem to consider the Committee's proceedings or reports newsworthy. The *Canadian Lumberman* announced the formation of the Committee and published a summary of the majority and minority reports, with an editorial tending to endorse a Commission such as that recommended in the minority report and in favour of a "more business-like administration" of the Department. "It looks," the *Lumberman* suggested, "as if the pivotal point of discussion . . . will be whether it is desirable and whether it is necessary . . . to place the administration of the lands and forests in the hands of a commission similar to the Ontario Hydro-Electric Power Commission . . . We suggest these majority and minority reports should be carefully studied if an intelligent judgment is to be formed."⁵⁸ This back-handed admission that things could be better was as far as the magazine was prepared to go.⁵⁹

Though the evidence did not clearly indict anyone for serious maladministration, it was obvious that the Department's goals were

vague and ill-defined and its procedures too informal and haphazard. Heenan's method of negotiating by round table consultation may have been well-adapted to settling labour disputes, but was too sloppy when valuable resources were at stake – especially as his criteria for development, as opposed to simple investment, were extremely vague.⁶⁰ Heenan himself was not imaginative and his subordinates seemed satisfied to let things continue as they had in the past. They would avoid scandal and encourage investment without considering the purposes of development, the means of best utilizing the resources, and the methods by which the Government could legitimately maintain control over these resources while providing for consumption on a renewable basis.

Though the Committee did not yield the political capital of earlier investigations, it had significant results: it focussed attention on problems of timber policy and administration, and cleared the way at the top for more creative administrative leadership. Heenan himself fully recognized the importance of the first of these points. He made it clear to a large conference called to deal with some of the major problems in the forest products industry, that it was the Committee that had made such a meeting possible.⁶¹ The Committee had highlighted some of these problems and had actually suggested that such a meeting be convened. The Legislature, Heenan said, now had “a real and sincere desire to help this industry – something that probably would not have been accomplished if it had not been for the Enquiry.” The people of the Province and the Legislature had taken forest resources for granted for too long.

Some dissent over the effect of the reports and the manner in which the Committee had proceeded served to sharpen public interest somewhat. Editorial comment, by no means extensive, tended to favour changing the administrative structure, some recommending that the forests be taken out of politics.⁶² Comparing the two reports, J. C. W. Irwin felt that the flagrant disagreement between them would justify the public in demanding the appointment of a royal commission to “produce a report that some people could feel approached impartiality.”⁶³ In the Legislature, C. W. Cox claimed that knowledgeable people had not spoken up for fear of reprisals, while those who had testified were persons who benefitted from present policies. A former Deputy Minister of Forestry, Frederick Noad, made similar charges in a letter to the Speaker and

Members of the Legislative Assembly, in which he implied that Committee members had conspired to exclude his evidence because he knew too much.⁶⁴ Three members of the Committee informed the House that Noad had not been present when the Committee was prepared to hear him.⁶⁵ None of these critics was very influential; but they contributed to the weight of evidence against the Minister. Opinion, though not powerful, was sufficiently adverse when coupled with the industry's suspicion of him, to justify Hepburn in transferring Heenan to the Department of Labour. In his letter of resignation, Heenan reminded Hepburn of the conditions the Government inherited in 1934.

Practically every newsprint company in Ontario was in receivership. Representatives of the industry came to the Government and admitted that they were unable to check its decline and asked the Government to take drastic steps to assist them. This you did, and as Minister of Lands and Forests, you asked me to administer the necessary medicine. It was very discouraging at times. The patient who needed the medicine not only complained, but avoided the treatment at every opportunity. However, the results count and now the industry is on its feet again. . . .⁶⁶

A few days later Walter Cain followed his chief into resignation. In Heenan's place, Hepburn appointed N. O. Hipel, the strongest Cabinet Minister remaining in the Government. Hipel and his new Deputy Minister, F. A. MacDougall, set about taking the first steps toward the most important reform of administration and policy that the Department had ever experienced.

THE RE-ORGANIZED DEPARTMENT



The year 1941 was hardly a propitious moment for undertaking the reorganization of the Lands and Forests Department. Canada was in the throes of a World War that made heavy demands on the staff and resources of the Department. Many key personnel were absent on service with the armed services; and all equipment, from typewriter ribbons to bush planes, was in short supply. These conditions hampered the Department in making the decisions necessary to reform; hence, the reorganization had to be a gradual process, extending from the appointment in 1941 of a new Minister and Deputy Minister down to 1946 at least, and, in some of its aspects, down to 1950.¹ This delay, however, afforded the new men a chance to find their feet and to begin making minor adjustments which

anticipated the major changes that were to follow after the war. Hundreds of meetings were held and plans drafted. But the pattern of peace after 1945 was different from that after 1918, and most of the war-time plans were never put into operation.

The general aim of the new régime was to create a fully professional service capable of bringing the lands and forests resources under sound and competent management. Before this could be done, steps would have to be taken to remove the suspicion of corruption and incompetence that hung over the Department and bring its control "away from the Street (Bay Street) and back to Queen's Park". However, the new régime was convinced that "once the Department shows its ability and willingness to administer the public domain honestly, this fear (of corruption) will disappear",² opening the way to the more important long-range goal of sound management.

The new Minister of Lands and Forests, the Hon. N. O. Hipel, took office at the end of May, 1941. Before many days had passed he sent for Frank A. MacDougall and offered him the job of Deputy Minister.³ MacDougall had been recommended to Hipel and was known to be highly thought of in influential press circles. He was a native of Carleton Place and had served with the Canadian Army overseas during the First World War, before graduating in forestry at the University of Toronto in 1923. In the same year he joined the Department of Lands and Forests, where he served first as assistant forester at Pembroke, and shortly afterwards was transferred to Sault Ste. Marie, to become in 1926 district forester.⁴ Four years later, after having been responsible for starting the Kirkwood Forest Management Unit near Thessalon, he was promoted to the key post of Superintendent of Algonquin Park. Under his direction the Park, whose development had slowed down in the 1920's (being, as he described it, "a problem child of government"), became once more "a beehive of activity" reminiscent of its earlier years. MacDougall reorganized the Park's fire prevention service and speeded up its communications by introducing airplanes for the work; he himself secured an air pilot's license and personally patrolled the Park from end to end in a Government Fairchild. He also actively promoted fish and wildlife management, and was responsible for bringing to the Park Professor W. J. K. Harkness, of the University of Toronto, to establish at Opeongo Lake the laboratory named after him, which



Deputy Minister FRANK MACDOUGALL servicing his plane at Oba Lake, in 1948

became the main centre of Ontario's fish research activities.⁴

As Superintendent and therefore host to many official and unofficial visitors to the Park, MacDougall was well known to members of the Legislature. They recognized in him a man of varied gifts and interests (his hobbies included the playing and making of violins), who possessed a photographic memory, a far-seeing judgement and an ability to make quick, sound decisions. While at Algonquin Park, he had come across an American book, *Governmental Problems in Wildlife Conservation* (1935) by Robert H. Connery, which, he says, introduced him to ideas that helped him plan, ahead of his appointment as Deputy Minister, the reorganization of Ontario's forest services. Hence, when the occasion arose in 1941, he was ready with many of the answers which Queen's Park was seeking. At appearances before Parliamentary committees MacDougall was always well briefed, with his documentation ready to hand, and apparently able to anticipate every question. Besides being so well qualified as an individual, he had already risen to the highest field position (Algonquin Park Superintendent) in the Department. As such, then, he was a logical choice for the highest service position of all.

Hipel and MacDougall had never met before, and at their first encounter MacDougall, always laconic and to the point, bluntly stated his conditions for accepting the appointment. "We could give it a try," he said to Hipel, "and if we get along together, that's okay. But I want you to tell me if we're not making it, and then I'll go back to the bush." The Minister appreciated this frankness and asked: "Where do we start?" "First, we have a Government audit," came the reply, "and then we reorganize."⁵ MacDougall made it clear that he envisaged a gradual reorganization, without any sudden break with the past. He approved to some extent of what had been done in 1934, feeling that "it had brought about a consolidation of field organization in Timber and Forestry, though Lands were left largely on their own."

Fortunately Hipel, one of the ablest of Hepburn's Ministers, was a man whom MacDougall could respect and work with. In the latter's words, Hipel was "a very good, strong man of Germanic descent and trained by the Mennonites. He had that Germanic thoroughness."⁶ Hipel, like MacDougall, possessed a sound sense of planning for the future, but his mind was less flexible; he preferred

sticking to already known objectives, rather than resorting to improvisation. His considerable practical knowledge of the lumber business helped make him a highly effective Minister of Lands and Forests, during the vital first stages of the reorganization.

MacDougall saw that reorganization largely in terms of a military operation. "You move forward on a broad front, not stopping at roadblocks and so on, but simply backing up and going around. You can always deal with a problem later; there are many irons in the fire." Elsewhere he observes that "the principle we followed in resources management was to have many programmes, many points of attack, so that a block or obstacle at any one point doesn't hold up progress on the overall front."⁷

His determination to move forward was tempered by two factors; the relationship between himself and the successive Ministers (seven) under whom he worked; and his relationship with his own staff. In regard to the first of these, MacDougall has stated that "the job of the Department is to make the Minister look good. 'He is our guy!' and the Minister must think, 'This is my staff'."⁸ Translated into practice, this meant that whenever he was weighing major policy issues or reviewing current projects, MacDougall would always ask questions that anticipated queries likely to be raised in the Legislature; further, he would try to express complicated programmes of resource management in terms that his layman chief could quickly grasp and effectively pass on to his colleagues in the Cabinet and Legislature.

He recognized a clear demarcation between the duties of the Minister and those of his Deputy. The Minister's responsibility lay in the field of policy decision-making and in representing the Department to the public. "I consider it essential," he told the Hon. H. R. Scott, "that as far as possible the Minister's name be paramount in press relations."⁹ "In the political sense the Minister is blamed for all failures. Therefore he should receive credit for all good work done . . . There is also collective responsibility. The good work done by any Minister is shared by all. His errors have to be faced by all. Thus the Minister should stand out in front as the leader to the public."

It is clear that MacDougall, during his twenty-five years in office, earned the reputation among Cabinet members of being a strong Deputy Minister. Some of the Ministers under whom he worked



HON. NORMAN O. HIPEL, *Minister of Lands and Forests 1941-43*



FRANK A. MACDOUGALL, *Deputy Minister of Lands and Forests 1941-1966*

sympathized with his plans and ideas and allowed him considerable latitude in completing the reorganization of the Department. This was true not only of Hipel, who left the Lands and Forests Department after two years, but of the experienced businessmen and capable administrators who succeeded him, the Hon. W. G. Thompson (1943-46) and the Hon. H. R. Scott (1946-52). The latter, an ardent fisherman and hunter, presided over the important and difficult merger of the former Game and Fisheries Department with the Lands and Forests Department. He was followed by a former Minister of Mines, the Hon. W. S. Gemmell (1952-54), a kindly and sincere man who suffered from chronic ill-health and therefore did not initiate many changes. His successor, the Hon. C. E. Mapledoram (1954-58), saw things rather differently. By that time most of the reorganization had been done, and it was a case of keeping up with routine. The Minister, therefore, in a rather belated implementation of one of the recommendations made in the Kennedy Report of 1947, seems to have sought to take some of the work-load off his Deputy's shoulders by decentralizing his authority through the appointment of two Assistant Deputy Ministers at headquarters and two (Regional Directors) in the field, who were to report directly to the Minister. The plan, however, did not develop as expected under Mapledoram's successors, the Hon. J. W. Spooner (1958-62), an untiring worker with long municipal experience, and the Hon. A. Kelso Roberts, Q.C. (1962-66), the former Attorney-General of the Province. From 1957-1964 there were two Assistant Deputy Ministers at headquarters, but thereafter only one remained. He, however, in the person of G. H. U. Bayly, was chosen to succeed MacDougall on the latter's retirement in 1966 from the position of Deputy Minister. Bayly, who served as a pilot in the R.C.A.F. in the Second World War, joined the Division of Reforestation in 1945, and headed this branch from 1953 to 1957, when he became Assistant Deputy Minister.

A factor which contributed largely to MacDougall's influence throughout his long term of office was his firm hold upon the loyalty of his staff. To the most influential men in the Department his appointment represented the final coming into power of the professional forester. To them, therefore, he was more than just a strong Deputy Minister; he was the symbol of a new era, with a special claim on their personal loyalty. In addition, he showed a marked

ability in his management of men. From the outset he was averse to making drastic personnel changes.¹⁰ Thus he dispensed with the services of no more than three senior officials of the old régime – one of whom was unwilling to conform to his plans for centralized accounting, another who disqualified himself by irregular practices, and a third whose job was found to be unnecessary. MacDougall much preferred to move people around and allow each man to find his own level.¹¹ This involved his getting to know a good deal about his subordinates, and creating in their minds a conviction of his own absolute impartiality and primary concern for getting the job done. In accordance with his oft-expressed belief that “you have to gamble with men,” he chose his staff by a lengthy process of assessment and re-assessment. Thus several times a year he would hold meetings of his senior officers to review the capabilities of the men further down the line. The resultant briefings gave him a fair estimate of the younger men in the Department, which he subsequently tested by personal contacts. The staff responded to this treatment and felt they were being judged on their merits. This opinion was reinforced by MacDougall’s conviction that a man assigned to a given responsibility would perform it best if allowed to develop the position on his own. “If a man has to ask me what his job is,” he would say, “then he is not the man for that job.” The converse of this was his later boast that “now everyone in the field is a potential deputy minister. Seven such men have already left (us) to become deputy ministers in other departments.”¹²

* * * * *

The Department, as Hipel and MacDougall found it, was a complicated structure. On paper it consisted of a main office, six branches, the Provincial Land Tax Office, an inspector and an investigator charged with enforcing the Woodsmen’s Employment Act and a forest pathologist. The field service consisted of twenty-six lands agents and homestead inspectors; fifty-six district and assistant foresters and chief forest rangers, a reforestation staff of fifteen; five radio operators and fifty-one other employees ranging from pilots to clerks.

The head office organization was particularly confusing. Around the Minister were gathered a group of executives whose duties

seemed to defy their inclusion in any of the branches. Under the former Deputy Minister (W. C. Cain) there had been a Solicitor and a Land Tax Collector, an assistant to the Deputy Minister and a statistician who later designated himself, rather vaguely, as also "itinerant auditor."¹³ The assistant to the Deputy Minister "performed no function other than a clerk's."¹⁴ The Branches – Lands, Accounts, Files, Surveys, Forestry and Woods and Forests – were a mixed bag. Most performed their own accounting, despite the fact that a separate Accounts Branch had been established. Further, several of the branches were either duplicating services or performing functions that could have been done better by some other unit. For example, aerial surveys were undertaken by the Forestry Branch, though the Surveys Branch was in charge of all other survey work.¹⁵

The chief reason for this faulty organizational structure was its antiquity. Many departmental functions had been assumed by particular offices or branches, simply because certain individuals had once made these functions their own preserve. After decades of development along these lines the Department had taken on a haphazard structural form that was incompatible with effective administration. This state of affairs was not unusual. Lands and Forests, said MacDougall, was "an average government department of the day with a lot of hardworking men and women. It had just come through a depression. The . . . Government was pledged to economize, and there was little hope for expansion or the adoption of new ideas."¹⁶ Deputy Minister Cain had tried to supervise a much fragmented Department that was understaffed, particularly in the technical field where there was a shortage of trained administrators. He and his men "had fought a rear-guard action from 1934-1941, holding off those who would gain through chaos in forest administration. In 1941 they must have passed on the cross to younger minds with a sense of relief. But none the less, there had been steady, though at times halting, progress towards forest management from the '20's through to the '40's."¹⁷

The Hipel-MacDougall reorganization was based partly on the experience and structure of the U.S. Forest Service, and partly on Robert H. Connery's *Governmental Problems in Wild Life Conservation*. The long-range goal of this reorganization was, in Connery's words, to meet "the vital need for a planned conservation

programme.”¹⁸ This was to be achieved in two stages. First, the internal structure of the Department was to be rearranged; second, policy was to be remodelled so as to bring about controlled management of resources. The first step involved a reorganization of the functions of the branches, to be followed by a functional and geographic reorganization of the field service. These reorganizations would bring about a much-needed decentralization of activities, which would prepare the way for the realignment of policy after the war.

First, some vestiges of the old structure had to be cleaned up. At least three of the Branches – Forestry, Woods and Forests and Provincial Land Tax – were still doing their own accounting; while the Air Service and the Reforestation Section of Forestry were also doing independent accounting. Again, each Branch seems to have been autonomous in matters of personnel, office management and supplies. The Branch heads were in the habit of making their own separate requisitions to the King’s Printer for stationery and printing; the Forestry Branch ran its own stockroom, and so forth. To eliminate these anomalies, MacDougall created three new divisions*, Accounts, Operations and Law, to be of service to the main existing operating divisions, Reforestation, Forest Protection, Timber Management and Land and Recreational Areas. There were also three other divisions, Air Service, Research and Surveys, which partly performed service functions for other divisions and partly acted as operating divisions in their own right. Altogether, therefore, there were ten divisions, with the following functions:

ACCOUNTS DIVISION. Examination of the Department’s accounts by the Provincial Auditor showed that, although nothing criminally wrong was being done, established accounting procedures were not always being followed and that the lack of a double entry system of bookkeeping made the accounts seriously difficult to control.¹⁹ Accordingly, it was decided that all departmental accounts should henceforth be kept by one Division, that of Accounts.²⁰ The decision met with opposition from the former departmental accountant, Lount, who also opposed the introduction of a new system of bookkeeping.²¹ He was eventually asked to resign, and his successor, J. G. MacMillan, soon devised a system of double

*The term “division” was used at this time, probably in imitation of American practice. As a result of much internal discussion it was replaced in 1959 by the term “branch”.

entry bookkeeping that came into force in the 1942 fiscal year. He also centralized the main office and field office systems of accounting so as to facilitate the use of mechanical equipment and the employment of more staff. Henceforth the Accounts Division became responsible for receiving and disbursing all monies of the Department, for accounting to the Minister for all revenue and expenditure and for carrying on the Land Tax administration. To do this, the Division also became responsible for staff accounting at head office and district offices, and for laying down the procedures necessary for the carrying out of their functions.²²

OPERATIONS AND PERSONNEL. This Division had the duties of "organizing and coordinating the activities of the various divisions to effect an efficient and economic business organization" and of preparing and disseminating all general information concerning the Department's activities. It was divided into three sections – Operations, Personnel and Information (or Education).²³ The Operations section covered organization, office management, working conditions and the purchase of equipment and supplies. The Personnel section handled the recruitment and classification of employees, rates of pay, service records, safety regulations and certain aspects of training such as the (future) Forest Ranger School.²⁴ The Information and Education section was in charge of disseminating information to the public "in order to render a better account of the Department's stewardship of Ontario's forest heritage to its owners, the People."²⁵ This included keeping the public well informed in the summer months about the danger of forest fires.

LAW DIVISION. Taking over the functions of the former departmental solicitor, this Division* took charge of drafting legislation; advising on the preparation of agreements, regulations and Orders in Council; reporting on the Department's legal position and helping to settle disputes involving the Department.²⁶

REFORESTATION AND CONSERVATION. The Forestry Branch had been the parent of the modern Department. It had given Ontario a forest

*From 1950 to 1955 the Law Division was discontinued. In 1957 it was reorganized as a Law Section, and in 1959, after discussion with the Attorney-General's Department, became a Branch under a supervisor.

protection system; set up a district administrative organization; proved the value of forest research; introduced professionally trained personnel; and implanted in the administrative structure the guiding principles of forest management. Now it was to end as it had begun, as a Reforestation Division responsible for providing the seeds and seedlings for tomorrow's trees. The ideas that had prompted its original establishment had finally outgrown the Forestry Branch. A point had been reached when it was recognized that every branch of the Department should contribute in one way or another to proper management of the forest resources.

It was characteristic of the style in which the reorganization was carried out, however, that the Forestry Branch was not completely swallowed up by the new Timber Management Division – and for two reasons. First, the Branch was still headed by E. J. Zavitz, a man who had become a symbol in the Department, and to an extent throughout the Province, of the struggle to attain the type of forest management that was now being envisaged for the future. His basic interest remained reforestation and he showed no desire to head the new Timber Management Division. However, to have placed him at the head of a Reforestation Section within the Timber Division would have seemed a great insult to “Ontario's first forester”, and might have aroused public resentment at “the demotion of reforestation.”²⁷ Accordingly, the Reforestation Division was allowed to retain its independence until 1957, and to concentrate on reforesting the waste lands of southern Ontario as well as operating the provincial forest nurseries. To carry on this work more effectively, the region of southern Ontario was divided into six zones, each under a zone forester. In 1942 the Division reported that these zone foresters had “gained a more intimate knowledge of the particular problems of the territories to which they had been assigned, and that their personal contact with the land owners has been more satisfactory than correspondence.”²⁸ The Division continued to advise land owners on management and reforestation, to supply them with seedlings and to care for the forests managed by the Department under agreement with various county authorities.²⁹

FOREST PROTECTION DIVISION. This newly-created division was considered the kingpin of the Departmental organization. Without adequate protection of the forests planning for management,

reforestation, research or any other phase of forestry becomes meaningless. The new Division was almost identical with the forest protection section of the former Forestry Branch, though it relinquished management of its accounts, personnel and supplies.³⁰ Its duties now consisted principally of forest fire prevention and control, and of the control of forest insect-pests and diseases, in cooperation with the federal Science Service. Among its other important functions, it coordinated the Department's construction and maintenance activities.³¹

DIVISION OF TIMBER MANAGEMENT. This successor to the former Woods and Forests Branch retained the duty of disposing of all Crown timber, but gave up the function of collecting timber dues, ground rent and fire tax. It was also made responsible for managing the timber areas in general – and this gradually became its most important function.³²

DIVISION OF LAND AND RECREATIONAL AREAS. Following a comprehensive study of the administration of public lands for agriculture, summer resort and other uses, in order to establish a basis for a new Departmental policy, the system of making free grants of land was terminated as from June 25, 1941, except in the case of war veterans. In future, sale of land for agricultural purposes was authorized at fifty cents an acre, payable prior to sale; instalment purchasing was abolished.

On September 4th, 1941, amalgamation of the former lands agencies with the field services of Timber and Forest Protection was begun. By the end of March, 1942, “decentralized control of the administration of lands was effected”,³³ making the field officers responsible for the implementation of land policy as it applied to their area. Until the end of the war, staff was lacking to handle properly this transfer of duties; but in each district the field men were instructed by manuals and classes, to acquaint them with the new land policy.³⁴ In addition the Division devoted a good deal of attention to clearing up cases of clouded titles and to catching up with the backlog of summer resort sales.³⁵

At the same time, all land matters were combined into one Division, including management of Parks which had hitherto reported direct to the Deputy Minister. This combination lasted until

1958, when Lands and Surveys were combined in one Branch, without Parks.

AIR SERVICE DIVISION. This Division, formerly the Provincial Air Service, retained administrative control of its planes, which it posted to operating bases throughout the Department. In the field, however, all planes engaged on departmental business were henceforth to operate on orders from the district forester or chief forest ranger.³⁶ The Air Service kept its status as an independent Division until 1957, when it became a section of the Forest Protection Division.

RESEARCH DIVISION. The research work undertaken by the Forestry Board (1927) and abandoned in the early 1930's was picked up by this newly-created Division. However, although established in 1941 under J. A. Brodie, it did not get fully under way until three years later.

DIVISION OF SURVEYS. This Division had its duties extended to incorporate the aerial surveys work formerly conducted by the Forestry Branch.³⁷ It also looked after the requirements of other Divisions for surveys of various kinds – whether line surveys or aerial mapping – and carried on its own survey program dealing with provincial boundaries, base lines, township surveys, summer resort surveys, lake and river traverses, etc. It was also responsible for checking all surveys carried out on Crown lands by Crown or private agencies.³⁸

* * * * *

Of these ten Divisions one, the new Division of Operations and Personnel, bore the major responsibility for managing the reorganization of the whole Department. At its head was P. O. Rhynas who, before entering the civil service, had held executive positions in the lumber trade. His first Government appointment was in the Department of Labour, where he took part in the Dominion Youth Training Programme. He came to the Department of Lands and Forests at the time when the Hon. N. O. Hipel became its Minister. To give him adequate authority for the task of reorganization, he was designated as “chief investigator and special assistant to the Deputy Minister”. Closely associated with Rhynas in the reorgan-

ization was J. B. Thompson, Supervisor of the Personnel and Office Management Sections; he had worked in the Department since 1925 as departmental secretary, secretary to the Relief Land Settlement Committee, and "statistician and itinerant auditor". He later compiled a useful manuscript history of the Division. Another officer involved in the reorganization was A. R. Fenwick, who joined the Department as a graduate forester in 1927 and now became supervisor of the new Conservation Information and Education Section; he possessed an intimate knowledge of departmental routine, timber management and the practical application of scientific forestry. "Of such", wrote the Division's historian, "was the little group that faced, in its preliminary stages, the appalling task of adjusting, coordinating, planning and standardizing, according to the outlines of the ideas of the new Minister and his Deputy."³⁹

One of the first tasks of the new Division was to provide a speedy and effective means of communication between head office and the Department as a whole. This was achieved through a system of circulars, to transmit information and directions to all branches and throughout the field. These circulars were sent out both to the officer concerned and to all other interested parties, so that every section of the service would know what was taking place. All such circulars were issued over the signature of the Minister and Deputy Minister. The first circular issued gave a general description of the head office and field organization; the second established the circular system itself. This system is still in force today and, supplemented by the issue of various technical manuals, has been credited by MacDougall with playing a large part in establishing effective standards of administration throughout the Department.⁴⁰

Parallel with this step went an overhaul of the methods of controlling, storing and distributing office supplies. It included the replacement of much out-of-date office equipment; and the suppression of the old system of placing stationery contracts with private printers through the Queen's Printer, by the purchase of new office machinery that enabled the Department to print the bulk of its own forms and other stationery as required. Thereby costs were pared, and the need of various branches to maintain their own stockrooms ended. The Records Branch, long associated with the Lands Division, was now incorporated, as a general service section, in the Division of Operations and Personnel.⁴¹ At the same time the Per-

sonnel Section began to redistribute the Department's staff, as necessary, to place them "in positions to which they are better adapted";⁴² and to introduce a system of personnel training. These developments will be described in more detail later.

Under the influence of these reforms, the administrative pulse began to quicken. A steady stream of circulars and directives from head office began to push the Department along its new course. These set forth the duties of the field organization, tightened up responsibility for receiving and issuing mail and strengthened the divisional chief's responsibility for his own division's activities. Determined efforts were made to ensure that everyone understood that "the chief of each Division is in full charge . . . All division heads are equal in authority and status, unless otherwise specified. Inter-divisional dealings will be carried on without reference to the Deputy Minister. Questions of jurisdiction, overlapping and all matters involving Departmental policy will be discussed with the Deputy Minister, for rulings."⁴³

To ensure coordination of the work of the Branches, the Deputy Minister held a weekly meeting of the Branch heads, at which each head in turn presided over the proceedings and so had the opportunity to call attention to those problems which most concerned him. This was a way, as MacDougall described it, of bringing "organized confusion out of regimented chaos." The meetings continued to be held until about 1965, when they were suspended because they were in danger of becoming routine occasions, and it was felt that the Branch chiefs could now handle the problems among themselves. Inter-branch meetings with a flexible agenda and procedure were found more suitable for dealing with specific questions. General conferences of all district foresters were also held at first annually and, later, every other year. The chief device for keeping senior officers well informed on all matters of departmental and branch policy was the management course, organized by the Personnel Division. These courses not only took the place of the annual meeting, but tended to increase in number. They, together with the use of the telephone and the calling of *ad hoc* meetings, served "to break down the barriers between the component parts of the Department at headquarters."⁴⁴

Once a sensible basic plan for reconstructing the functions of the Department had been completed, the keynote of the reorganization

became “decentralization”. To the Minister and Deputy Minister this was one of the most vital features, emphasized in several circulars to Division chiefs and stressed as an important factor in reorganizing the field service. “Get the problem off the Minister’s and the Deputy Minister’s desks,” was MacDougall’s motto, “and deal with it in the field” – though he was careful to add “but keep a general overall control.”⁴⁵ Although the Department came close to relieving its top executives of all minor problems in routine operations, so that they could concentrate their attention on major aspects of the Crown’s business within the purview of the Minister, more decentralization still was necessary,⁴⁶ particularly in regard to the field service. If means could be found to relieve the Minister and Deputy Minister of field problems, the vexing tendency of local interests to appeal to Toronto for the granting of every concession and the settling of each dispute would be eliminated. In many parts of the Province the Department of Lands and Forests was the only contact ordinary people had with the Provincial Government. A corrupt or ineffective field service helped to create the tainted image before he went to the Crown timber agency or the land agent for help.⁴⁷

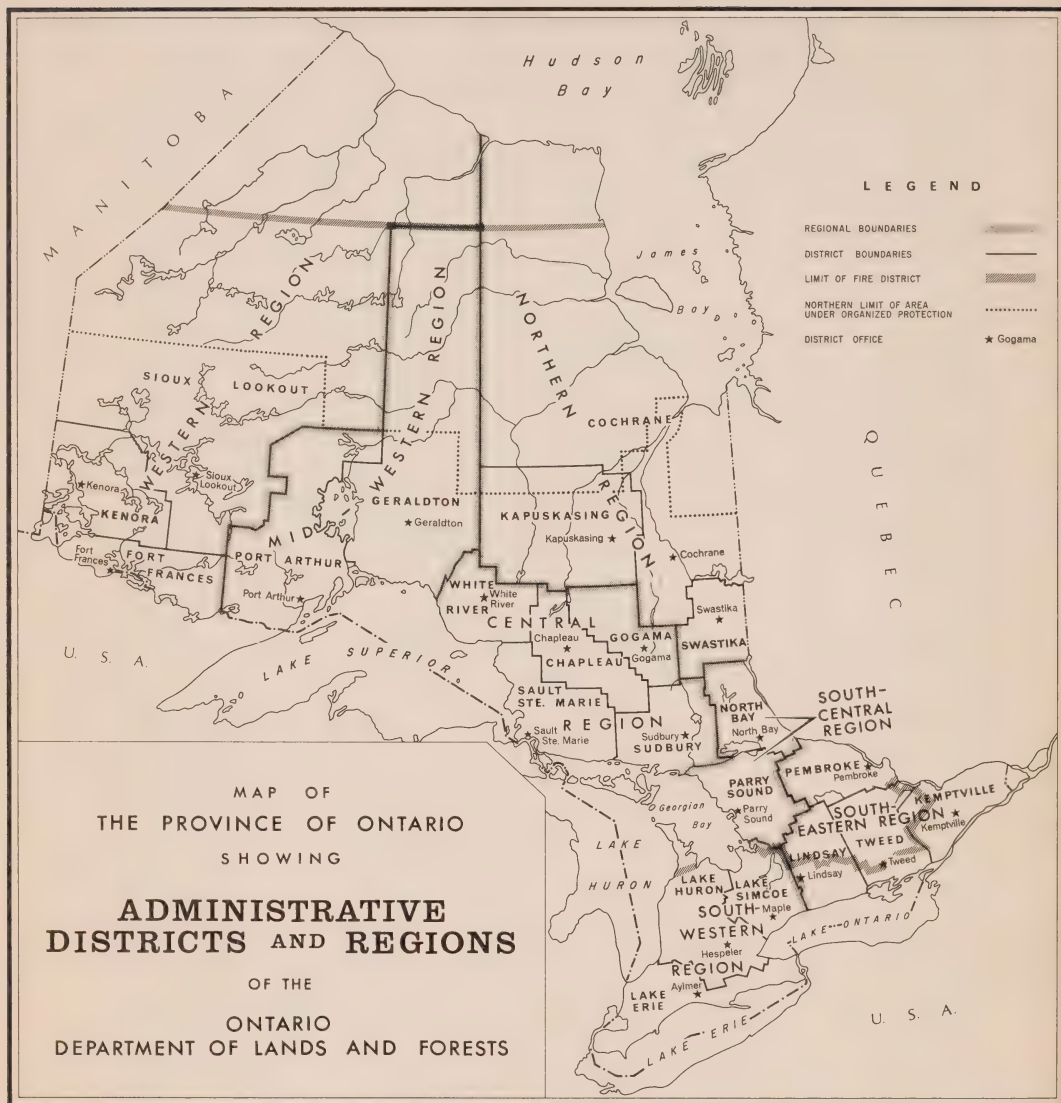
The long-established structure of the pre-1941 organization invited abuse. By tradition local officials had always been appointed on the patronage system. Thus a man appointed as lands agent in a small town probably owed his job to the kind offices of some politician or prominent businessman. As a consequence, he and his job formed part of the local political machine; he was accustomed to pin his trust on the local barons, deferring to their wishes even before those of his nominal employers in Toronto. Even without this conflict of loyalties, the former structure of the field service made coordination of effort and effective central control almost impossible. The relationship between the field offices and head office had been a straight line; cooperation with the field offices of other branches of the Department was almost unheard of. “We didn’t even speak to each other half the time,” remarked one old-timer in the field, Bill Darby. Even when men were needed for fire-fighting, the district forester usually searched for them in the local pool halls before he went to the Crown timber agency or the land agent for help.⁴⁷

On the other hand, financial control from Toronto was stringently, almost inordinately, exercised. “They’d tell you to get certain work

done and give you so much money to do it – and it was always about half what did.” Bill Darby recalled the natural consequences of such rigidity. “One time we had a meeting at Port Arthur. Charlie Mills and Zavitz were there. I said, ‘Now, lookit, if I can get this programme of work done for less money, I can use that money for equipment, eh?’ ‘Oh, no, no.’ ‘Why not? It’s appropriated for the district.’ ‘Well, some other district might then overspend.’ Sioux Lookout was just starting up – and it might overspend. Their district forester looked over at me, and I said: ‘Well, it *will* all be spent.’ You see, it just got to be a kind of thing – if you got money, so you spent it.”⁴⁸

The structure of the field organization was fairly straightforward. In such centres as Kapuskasing, Fort Frances, etc., there were usually two branches of the Department, Forestry Branch and Lands Branch. In some towns a Crown timber agent might still be found, though by 1934 most of these had been brought into the district organization originally set up by the Forestry Branch. The 1934 changes had brought considerable advantage to the Department, but had also caused a good deal of resentment, as well as some stiff battles for control that were not always won by the professional foresters. In fact, in the interests of economy, the Hepburn Government had opened up the district forester’s position to men such as air-pilots and ex-timber agents who had no claim to any professional qualifications. The net effect of such changes was to bring the Forestry Branch district organization into the same sphere of political dependence that had made the timber and land agencies so vulnerable to outside pressures. The resulting process of degeneration largely offset the benefits derived from creating a multi-purpose district organization.⁴⁹

These experiences dictated the main remedy of the reorganization – a decision to “get a technical umbrella over the field staff”, while taking care to ensure that there would be “as little dislocation of positions as possible.” In principle the district foresters, who were the key men of the field organization, were to be professionally-trained foresters; but this change could not be brought about all at once, least of all by removing the old officials. By taking over all the existing district foresters as they were, regardless of their training or start, Hipel and MacDougall were able to avoid the bitterness, jealousy and disruption that so often occurs when a reorganization takes place. As those district foresters who were without profes-



sional training retired or died, they were replaced by properly trained men, until a point was reached where qualified foresters held all district foresters' positions.⁵⁰ In the meantime, to protect the remaining unqualified district foresters from the political influences which had plagued them in the past, the thirteen districts of northern Ontario were carved up into five regions, each headed by a regional forester. These were selected partly on the basis of their personal capacity to serve as a "buffer" between the district foresters and the outside "pressure groups." Their function will be discussed in more detail later in this chapter.

Another prominent feature of the reorganization was a determination to destroy the old stultifying practice of limited field jurisdiction. A key circular, issued in 1946, pointed out that "rangers in the old days confined their efforts to their patrol areas, and it took years of reorganization to break down the idea that a map boundary was the end of a man's responsibility."⁵¹ The amalgamation with Game and Fisheries justified a careful assessment of this situation. "Boundaries are administrative tools to facilitate work, to provide channels for financial arrangements and staff matters," continued the circular. "In no case are they to become walls that will block or hinder any of the activities of the Department." It was therefore the particular duty of the regional foresters to see that "the staff have freedom to flow across district or other boundaries in all matters where their problems involve inter-district work, such as fires and law enforcement."

The aim of locating all field responsibility in the district office caused the bitterest battle of the reorganization. This was the move to bring the functions of the old Lands Branch under the jurisdiction of the district organization. The new chief of the Lands Division, Crosbie, issued a circular to all district foresters and land agents instructing them that "from this date all lands agencies within a district will be responsible to the district forester of the district. The district forester will, as speedily as possible, take steps to assure that the lands end becomes a part of the district organization."⁵² With this instruction clearly stated, Crosbie then began an epic journey across the Province. He visited all the lands agents and offered them a choice, either of being appointed lands supervisors in the districts to which they belonged, and thus becoming responsible to the district foresters, or of leaving the service. The agents,

most of whom "were political appointees, corrupt and often selling land illegally . . . didn't want to give up and used all the political tricks they could. Often the Department never got its books back."⁵³ Eventually, however, they had to give in, and the district organization then assumed its present structure, modified only by the later amalgamation with Game and Fisheries, the creation of the Parks Branch and the appointment of regional directors. Many of the changes in the field organization could hardly have taken place without the assistance of the new lines of communication – the information circulars and technical bulletins – developed by the Operations Branch.

The new regional structure was formally put into effect on August 5th, 1941, with the division of the thirteen districts of northern Ontario into five regions: Southern (covering Algonquin, Parry Sound and Tweed); Kapuskasing (Cochrane, Kapuskasing); Western (Fort Frances, Kenora, Sioux Lookout); Thunder Bay (Port Arthur)* and Central (North Bay, Sudbury, Sault Ste. Marie).⁵⁴ Five days later details of the changes were elaborated. It was made clear that no change was "contemplated in the duties of district foresters. They will report to Toronto as they have done in the past and their duties and responsibilities will remain the same as they have always been." The regional forester was to have more general duties, such as the compiling of long-term plans for fire protection and timber management in his region. Though he was superior in rank to the district forester, his authority was limited to those fields where his coordinating function was particularly important. Thus he could request transfer of equipment or personnel for fire purposes from district to district within a region during bad fire periods.⁵⁵ After the new system had been in effect for one fire season, head office evidently felt that regional coordination of fire fighting could be improved; for in February, 1943, regional foresters were instructed to hold regional meetings "prior to the fire season, to discuss and clarify new policies laid down during the year and to plan for the coming fire season."⁵⁶ Similarly, the regional forester's authority to coordinate the budgets of the district within his region was made clear from the outset. To prevent the total expenditure of the districts from exceeding that of the region, he was em-

*In 1942 Port Arthur was subdivided by the creation of the new district of Geraldton.

powered to stop work on district projects if he considered it necessary.⁵⁷ He could also recommend changes in the size and number of districts under his jurisdiction.⁵⁸ Above all, the purpose of the changes was "to free certain personnel from routine detail, so that they are free to inspect conditions over large areas and suggest lines of policy to be followed."⁵⁸

The precise nature of the regional forester's duties was purposely left vague. The men at the top had incorporated the position into the organization for two reasons – to create the indispensable technical "umbrella" to shield the district organization from hitherto perpetual siege by local power politics, and to introduce into the field organization senior officials capable of performing a staff function and at the same time of assuming certain line duties whenever and wherever conditions or the need for effective coordination demanded. Each district forester and his regional forester would have to work out a relationship that was peculiar to themselves. Clashes would probably be inevitable, and were; but it was better to put up with clashes than introduce a crippling rigidity into the system.

In fact, the first years of operation did produce a closer definition of duties, which was incorporated in a circular issued in April, 1944.⁵⁹ This stated precisely that the regional forester was responsible for "planning and the carrying out of policy in the region as directed by head office." This covered making long-term fire and timber management plans; transfer of fire equipment between districts; responsibility for surveys (soil and regional utilization) and research projects, especially insect research; checking company management plans; approval of all salary increments and coordination of district budgets. Again, it was emphasized that the regional forester "must free himself from routine detail" and carry out inspection of the large areas under his jurisdiction.

Today, the regional forester may be facing extinction, in northern Ontario at least. In a sense the position has served its purpose, that of protecting the district organization until a fully professional field service had been created. The political considerations that compelled the creation of the post will never entirely disappear; but since 1941 many local citizens have found that an appeal to the power of local politicians is not always necessary to achieve satisfactory settlement of a grievance. At present, the aspects of district activity which have political overtones are handled by a new official,

the regional director. This position was created in 1957 as the equivalent of an Assistant Deputy Minister in the field. At that time two regional directors were appointed, A. S. Bray and Keith Acheson, who divided the northern part of the Province between them. Gradually they have superseded the regional foresters in their functions of trouble-shooting and coordination; and it is probable they will receive increased formal authority in the next few years.⁶⁰

The duties of the district forester were already well defined by the time of the 1941 reorganization. The position had existed since 1922 and had gradually grown to embrace all the field activities of the Department. The reorganization added to their functions and so prepared the way for the wider responsibilities contemplated in the post-war period. From time to time they received reminders emphasizing particular duties, such as that of making periodical personal tours of inspection or of holding weekly informal discussion meetings with senior members of district staffs. However, care was taken to point out that "this circular is purely a suggestion indicating an administrative practice found useful at head office and it is optional whether or not a district forester decides to make use of the idea."⁶¹

The fundamental concept behind the district organization is the same today as it was a quarter of a century ago. There are three commonly used methods of describing the way it works. The first compares the district to the Department as a whole and implies that the smaller unit is a miniature replica of the larger. The second uses the symbols of "vertical" and "horizontal" lines to describe the basic structure. The third uses a similar approach by referring to "staff" and "line" functions. By visualizing the structure as a cross, we can use the vertical-horizontal, staff-line terminology to give an adequate description.

The vertical line, or "line function", represents the direct line of command and responsibility that flows from the district forester to the chief ranger, who is responsible for providing the physical means whereby policy is put into effect. The horizontal line, or 'staff function', is the planning side of the organization. It consists of a battery of supervisors each of whom plans some phase of the Department's activities in that district—timber management, forest protection and so on. In theory, these men have no control over the carrying out of the policies they recommend, though in practice they have a

great deal to say in such matters. The coordination of this 'staff' and 'line' function has always been one of the most difficult problems of practical administration; and it is one of the outstanding features of the district organization that it has to a large extent overcome the problem.

In terms of descriptive method Number One that treats the district organization as a miniature version of the whole Department, the horizontal line represents a small-scale head office, with its various branches designed to perform a staff function. The vertical line is the operating part of the Department, being necessarily geared to rapid and effective decision-making.⁶²

Though no two districts are identical, we can take the Sault Ste. Marie organization as fairly representative of all.⁶³ This district, which covers about eight thousand square miles and has a yearly budget of over one million dollars, is administered by a district forester, who in turn is responsible to the regional director at Sudbury. It is divided into four administrative divisions, each of which is headed by a chief ranger who is responsible to the district forester. Each division is further subdivided into deputy chief ranger divisions. There are nine of these in the Sault District.

Each chief ranger is responsible for all phases of the Department's work in his bailiwick, except for the fish-hatchery and nursery, which appear to be treated as operations for which the district forester himself takes direct responsibility. The chief ranger parcels out the responsibility for his various activities among the members of his staff. The main work of some officers is in timber administration; others give most of their time to fish and wildlife. The number of branches thus represented in the chief ranger division varies according to the activities of the division. Thus in the Clay Belt the ranger divisions located in areas where lands are open for settlement will usually have at least one officer to look after that side of administration; other divisions in the same area, but where there are no lands for disposal, will do without. Where activity is not intense in matters affecting one branch, an officer may spend only part of his time on them and the rest on other duties. At this level, and below, there is a high degree of manoeuvrability of manpower. An important distinction must be made between permanent and temporary (or casual) staff in the field. From the nature of its work, the Department of Lands and Forests employs a high proportion of

temporary personnel, averaging in 1964 just over one half of its total staff. 'Casuals' are relatively few at head office, but in the field during the summer months may amount to three times the number of the permanent staff. The latter usually have specific jobs assigned to them; but the temporary, seasonal staff actually carrying out the assignments may be moved from one activity to another as the season demands. Early in the spring, for example, many men may be put on general maintenance work, preparing for the coming season. Then for three weeks to a month a large number will be required for planting seedlings. Others will be putting young fish in the lakes and rivers. When the fire season begins, virtually all of them can expect at least one stint on the fire line during the season.

All the staff organization is located at district headquarters. At Sault Ste. Marie there are six supervisors – for timber, forest protection, lands, fish and wildlife, accounts and parks – also a man in charge of safety. Each is a specialist in his own area; he advises the district forester on policy and the chief ranger on the execution of policy. For example, in forest protection – which is slightly different from the others – the supervisor is responsible for advising on and directing the day-to-day goings-on in the district forest protection organization. He is also responsible for planning, construction, the Air Service (pilots, engineers and radio communications), and equipment maintenance. The timber supervisor has only a small staff directly responsible to him; but a number of specialists work on timber matters at the chief ranger level. He has to inspect their work and suggest changes in technique to improve timber administration. The fish and wildlife supervisor has a hatchery manager responsible to him and a management team that include a biologist. By contrast with timber, most of the fish and wildlife management planning is carried on at the district rather than the chief ranger division level. Similar descriptions could be given for the work of all the district supervisors.

Southern Ontario, however, has a different district organization history. There, political intrusions have played a part in the development of the organization. When the 1941 reorganization was first launched, its main impact fell on northern Ontario, where the most valuable natural resources were being exploited and where changes were most urgently needed. Meanwhile, the south continued to be permeated by political intrigue. There individuals habitually wrote

to their M.L.A.'s about every feature of the Department's activities; and it proved difficult in many cases to oust the political appointees. In 1956, however, a professional forester was appointed to take charge of Lindsay District, Leslie Frost's own riding. This man did a good job and convinced the Premier that a professional forester was capable of coping with the local political barons. Since then "purification" of the southern district has proceeded apace.⁶⁴

From 1941 to 1956 southern Ontario had been the preserve of one Division of the Department – Reforestation – and whatever reorganization took place was based on its needs. In 1941-42 six reforestation zones were created, under the control of zone foresters. These units, which were smaller in size than districts, served only to provide local residents with facilities for carrying out reforestation. The zone foresters spent their time on extension work, that is on advising owners of land what trees they should plant, how to treat them, and so on. They did not undertake any fire-ranging duties or other such activities, since all the zones were located south of the fire line. Nor had they any concern with the few Departmental operations in southern Ontario, such as the tree nurseries and the agreement forests. These were managed separately by officers who reported directly to the Reforestation Division in Toronto. This system continued until 1946, when the amalgamation with Game and Fisheries gave the Department a two-fold interest in southern Ontario (which became three-fold when Parks were added in 1954). Then at last it became feasible to introduce into southern Ontario the multi-purpose type of organization devised originally for northern Ontario. The process began in 1946 and eventually added six districts (Lake Erie, Lake Huron, Lake Simcoe, Kemptonville, Tweed and Lindsay) to the field structure.

The organization of these districts differs in several important respects from those further north. The most obvious difference lies in the absence of a chief ranger and his organization. Instead, the zone forester carries on the duties originally assigned to him in 1941. Most zone foresters are responsible to the timber supervisor and not to a district forester. The same timber supervisor is also responsible for agreement forests and forest nurseries. He is, in fact, an integral part of the 'line' organization as he is in northern Ontario. The fish and wildlife supervisor plays much the same sort of role; a series of conservation officers are responsible to him, each of whom is assigned

a patrol area. Also, he is in charge of the hatcheries within the district. The parks supervisor has a small staff. The forest protection supervisor is a very minor figure compared to his counterpart in the northern districts. Finally, the lands supervisor can usually do by himself all the lands work required in the district.

THE DISTRICT FORESTER. Throughout the Province, he is responsible for coordinating the supervisory and the operating heads of the district organization. He is the king-pin of the organization and if he fails to appreciate the nature of his work, the whole organization fails. Consequently, it is necessary to describe him, and his conception of his responsibilities, in some detail.⁶⁵

Most district foresters are seasoned veterans of the Department. At present, men with training as foresters predominate, though it is likely that biologists will come to hold the position as frequently, once the younger biologists now in the Department gain more experience. A district forester has usually had fairly lengthy field experience – at least three to five years in a supervisory position. Usually, too, he has attended one or two departmental executive development courses, thereby acquiring a broad picture of the Department's role in the Province and some idea of the general function of government in Canada. He has a good working knowledge of the dozen or so main statutes administered by the Department and the regulations made under them. He also has a working knowledge of each of the head office branches, the duties of each of his supervisors and a general understanding of the activities of other government departments and their relationship with Lands and Forests.

He knows how much the steady functioning of the district organization depends on him. He is the Department's spokesman in the district and must be aware of the possible embarrassments his statements might cause to it. For example, if he failed to check competently the scaling of timber limits, this could lead to the loss of Government revenue or to embarrassment if the companies were overcharged. A poor decision in fighting a forest fire might cause unnecessary destruction of timber, and again involve considerable loss of revenue. He often finds it difficult to obtain objective unbiased views and opinions from individuals either inside or outside the Department. He must reconcile conflicting information, develop

long-range plans, interpret broad areas of legislation and apply them to specific situations. He must use original and creative thinking in solving problems, make decisions under stress, and stick to principles and decisions when under pressure from individuals and groups. Indirectly, most district foresters supervise some seventy-five employees during the winter months and four to five hundred during the summer. His basic assignment is to plan, organize, supervise all departmental activities in his district; this includes managing a budget that often reaches the million-dollar mark annually.

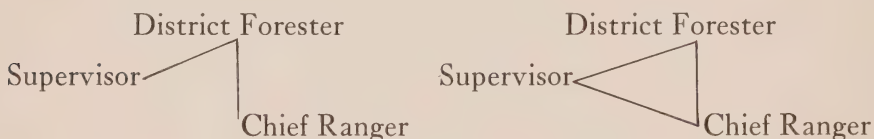
The district forester spends at least one-third of his time in this planning and organizing work. He has to place his men so that they are reporting to him through adequately qualified supervisors or carrying out work in "special technical fields and/or in specific geographic areas". He assigns work to the appropriate supervisor or chief ranger according to the technical requirements of each project, the time and staff available and the area to be covered. He keeps a general eye on all activities, inspects the projects in progress, receives reports on them and allocates funds as necessary. He instructs and trains his supervisory staff, explaining to them technical procedures where necessary and giving them interpretations of policy. He is responsible for discipline, staff classification and salary recommendations. He holds staff meetings periodically to deal with policy changes, investigation of grievances and so forth.

Public relations takes up another one-fifth of his time. This includes making press and radio releases, speaking at meetings, representing the Department and supplying information to local M.L.A.'s and other public persons and groups. Another ten per cent of his time goes to the preparation of the annual district budget; this involves forecasting current and long-range developments and programmes for the area. He also recommends to head office the purchase of all major equipment. He has to make frequent trips to Toronto, and keep in contact with other district foresters to ensure uniformity of action between one district and another. To do all this the district forester must be on call twenty-four hours a day, and must limit his vacation to the winter months. He is normally away from home about forty days and nights a year.

The Department can expect all this of its district foresters because it feels that their position gives them scope to develop administrative ability. Decentralization has given them considerable responsi-

bility and they report with pride that "sixty per cent of all decisions require initiative, imagination and acceptance of the responsibility delegated for the administration of the district." But, however hard the district forester works, however well he understands the techniques of running his organization, he will never succeed in his job unless he understands that he must delegate authority and be sympathetic to individual problems, while maintaining a firm control on the chain of command. The core of his success is the manner in which he approaches the central problem of his organization – the triangular relationship between himself, each of his district supervisors and his individual chief rangers.

Theoretically, there should be only two lines on an organization chart illustrating the relationship between the district forester and these officers. In actual fact, a triangle is essential.



A district forester explains the relationship by pointing out that he feels he can leave his supervisors to operate independently as long as they know enough to be able to judge when their actions impinge on the interests of their colleagues or the authority of their superiors. A fish and wildlife supervisor knows, for example, that he must check with his colleagues before he clears a lake of fish by using poison. If the lands supervisor had planned to subdivide that particular lake front for summer resort location, they both know they must work out cooperative action. The fact that he knows he has to clear with his fellow-supervisor places a safety-valve on the activities of each supervisor. A second safety-valve is represented by the district forester himself who, in the final analysis, must always have control. In effect, then, there is horizontal control through fellow-supervisors, and vertical through the district forester himself. When he is dealing with the chief ranger, the supervisor knows that in the last resort the district forester can order the chief ranger to cooperate; but he also knows that he is competing with other supervisors for the facilities that the chief ranger has at his disposal.

Consequently, if his projects are to be carried out properly, he must maintain good working relations with the chief ranger, must win him over to support whatever project he is planning to institute and must make it clear to all involved that he does not want to monopolize the manpower resources available.

It is through such subtle relationships that the district organization successfully co-ordinates the 'staff' and 'line' functions. Each man in the structure must understand the resources and limitations of his authority. He must be able to generalize his functions enough to balance his colleagues' needs against his own in the light of the overall objectives of the Department. The district organization is a mechanism that depends for its success on tolerance, understanding and wholehearted support of all involved. But responsibility for that success must rest most heavily on the district forester himself, who must appreciate all these contributory factors and must be capable of harnessing all of them to the achievement of the Department's goals.

PERSONNEL PROBLEMS. Throughout its long history the Department has faced personnel problems, although no specific agency was set up to deal with them until 1941. As early as 1857 the Civil Service Act had classified the clerks in the Civil Service and specified their salaries and those of other officers; revisions were made in 1878 and 1913, through actions by the Lieutenant-Governor in Council.⁶⁶ In 1905 a general review of departmental salaries took place, resulting in many pay increases. As a result salaries were in good shape down to 1914; but during and after the First World War their level fell far behind the rising cost of living; and, in spite of increasing dissatisfaction, the trade depression of the 1930's actually brought salary cut-backs.⁶⁷

Down to 1878 there existed no system of superannuation; but from that year on, gratuities were paid to retiring officials, representing roughly one month's pay for each year of service.⁶⁸ It was not, however, until 1920 that a Superannuation Act was passed, defining age of retirement and setting up a superannuation fund. Over the years the officers and clerks of the Department were governed by certain rules, e.g. preserving secrecy of documents and regulating outside earnings. But no standards or qualifications were set for employment until after the Forest Fire Prevention Act of

1917, which made the Department directly responsible for all fire rangers. Originally, fire rangers had no special training; but slowly the demand grew for setting up a specially trained force. After World War I the district organization was slowly introduced, with each district under the direction so far as possible of a university-trained forester.⁶⁹ From 1921 on the Department was hiring foresters as they graduated. But in 1934 retrenchment of staff and salary cuts became the order of the day; and the dismissals of skilled technicians which followed caused a serious setback to the *esprit de corps* which was growing up in the Department; as late as 1947 recovery from this *malaise* was said to be incomplete.⁷⁰

Until 1941 no specific organization existed to deal with personnel problems. In the reorganization of that year, however, Frank MacDougall established the Division of Operations and Personnel, and made it largely responsible for recruitment, training, management, welfare and remuneration of the staff.⁷¹ The immediate problem of the moment was shortage of personnel due to enlistment in the armed forces.⁷² The Department had to mark time during the war period and at its end to begin retraining its ex-servicemen to resume their work in the forests. It also at this time hired many immigrants, including foresters; today there remain on the staff thirty foresters who were trained outside Canada.⁷³ The Department emerged from the Second World War, according to the Kennedy Report, seriously understaffed; and it took several years to get rid of the less efficient personnel who had been retained or recruited during the war, and replace them with returned ex-servicemen or other well-qualified applicants.⁷⁴ However, during the next twenty years the size of the Department more than quadrupled, rising from eight hundred and sixty-one in 1943 to three thousand, six hundred and forty in 1962.⁷⁵ The proportion of professionally-qualified employees also rose steadily; for example, foresters increased from fifty-six in 1943 to two hundred and thirty-one in 1962; biologists from eighteen in 1949 to sixty eight in 1962; and licensed scalers (cullers) from three hundred and forty-three in 1951 to seven hundred and twenty-five in 1962.⁷⁶ These figures indicate not only an expansion of the Department's services, but a marked improvement in their quality and training.

Soon after the amalgamation of the former Game and Fisheries Department with the Department of Lands and Forests, a standard

uniform was adopted for all personnel, and came into effect in 1947. This had the double purpose of ensuring identification of all staff members, particularly in their contacts with the public, and of strengthening staff morale generally. Regulations were issued governing the use of the uniform and the standard of behaviour required from those wearing it.

There were, at this time, three types of employees – permanent, continuous temporary and casual.⁷⁷ It was the Department's policy to keep the number of temporary employees to a minimum; and when in 1947 their number reached an all-time high of five hundred and sixty-two, strict orders were issued to keep it within bounds, and it was in fact gradually reduced by 1962 to one hundred and eighty-nine.⁷⁸ On the other hand, the number of casual employees increased steadily over the years, with the growth of seasonal activities in forest protection, parks and other fields. In the early fifties some of these were certificated onto the permanent staff, but then decided they preferred casual employment, with its higher rates of



A conservation officer checking hunters' licences

pay. This state of affairs continued, in spite of efforts by the Civil Service Commission to check the imbalance.⁷⁹

A promising means of recruiting staff was developed soon after the Second World War, by the establishment of the Junior Forest Ranger program. It was initiated on a small scale in 1944 and 1945, for the purpose of giving seventeen-year-old boys training in the bush for the summer months, to acquaint them with bush life and to free older personnel for fire-fighting. The programme proved highly popular; and the number of junior forest rangers employed in the service rose rapidly from eighty-three boys in 1947 to thirteen hundred in 1963. The boys were located in sixty-four camps scattered through the sixteen districts of northern Ontario. In 1953 an officer was added to the Personnel Division who was charged with co-ordinating and directing this work.⁸⁰ The programme not only provided a large number of summer jobs for high school students and gave them practical training in bush work and conservation, but also in many cases helped them decide their future vocation.

The original list of qualifications of forest rangers stated that they must be "active, energetic men of cool temper and good judgment, but in addition . . . they must have a thorough bush training."⁸¹ But the increase in the ranger's duties in regard to scaling, timber work, cruising, etc., and the increased use of technical equipment, soon necessitated the addition of further qualifications. Accordingly the Department decided, in co-operation with the Faculty of Forestry, University of Toronto, to establish a Forest Ranger School in the University Forest near Dorset, Ontario. Although this school was not actually built and opened for class work until 1945, its first classes were held at Sherwood Forest Camp in Haliburton in 1943-44. Originally designed to train Lands and Forests employees, university students of forestry and employees of forest industries, the institution gradually changed its emphasis until in 1960, with the appointment of Quimby F. Hess as its director, it became a technical-vocational school aiming at giving pre-service training to departmental recruits.⁸² In the words of the Annual Report for 1961, "the School is now the main source for the recruitment of personnel to fill full-time forest ranger and conservation officer positions, and preference in filling such positions is given to graduates of this School, or to those who have acquired an acceptable equivalent."⁸³ It still serves as a source of personnel recruitment for the forest industries.

Besides the Ranger School, the Department also provides its staff with various opportunities for taking training courses, e.g. in first aid (by 1961 affecting nine-tenths of all district employees) and safety (through Councils started in the early 1950's and now numbering twenty-three).⁸⁴ The head office staff course, begun in 1942-43, was intended primarily "for employees now in administrative positions; for those who are being trained for such positions; or those who are good prospects for advancement in the future." It was described as "an orientation course" providing instruction through lectures and practical demonstrations of the work of the various head office divisions, to acquaint those attending with all the functions of the Department.⁸⁵ The name of the course was changed in 1952 to "executive development" and, as such, has been continued to the present time.

Implicit in this increased concern with training was the growth of professional status among the field staff. The chief field officer was a technically trained forester, a graduate in forestry of a university. From 1921 onwards, the Department began employing graduate foresters, though by 1943 there were still only fifty-six foresters in the service. After the Second World War the hiring of qualified men increased; but the demand far outran the supply. By 1962 foresters on staff numbered two hundred and thirty-one.⁸⁶ The growth of professionalism has been even more marked in another position, that of forest ranger. The term originally applied only to fire rangers, but was gradually expanded after 1941 to include scalers, Crown timber agents, Crown land agents and park rangers. Professional training became imperative and was supplied through the Ranger School at Dorset.⁸⁷ In 1963 the increased technical knowledge and training of the forest ranger was recognized when his title was changed to that of forest technician. After 1946, with the amalgamation of Game and Fisheries with Lands and Forests, another professional made his appearance, the biologist, who was, of course, a university graduate with a science degree. In addition the Ranger School provided, for conservation officers, special training in scientific management of animals and fish.

Professionalism finds its natural recognition in the salary scale. During the Second World War the level of staff salaries, which was controlled not by the Department, but by the office of the Civil Service Commission, remained fairly stable;⁸⁸ but by 1947, as was

acknowledged in the Kennedy Report, it was lagging far behind the increased cost of living in the post-war era. This Report declared that "if the Service is to attract and maintain high-calibre personnel, it must be placed in a position to meet the competition of industry . . . Unless we are willing to spend the money necessary to employ three or four times the present numbers of foresters and other technical personnel, including rangers, scalers, etc., forestry and the maintenance of forests in this province will continue to deteriorate."⁸⁹ It would seem that the Department took these words to heart. By 1965 the salaries of foresters, which in 1947 ranged from \$2,340 to \$6,000 and over, had about doubled to a range from \$5,520 to \$12,000 per annum. Similarly, the salaries of forestry technicians and conservation officers increased between two- and three-fold during the same period. Salaries of employees in general also showed a comparable rise; in particular, the system of annual salary increments tended to become a regular custom. In the mid-fifties there was even a flurry of concern, on the part of the Civil Service Commission, at the increasing tendency toward "double increments" for meritorious service.⁹⁰

Closely connected with salaries is classification, involving the defining of the duties and qualifications of the various positions and the arranging of them in groups. This began formally after the First World War,⁹¹ but reached its present stage of elaboration only after the Second World War. Classification is the responsibility of the Civil Service Commission, but for positions peculiar to itself the Department exercises a major degree of influence. In 1960 the Government hired the firm of Stevenson and Kellogg to make a study of the whole service;⁹² this resulted, so far as Lands and Forests were concerned, in reclassification of a number of professional positions, especially of field officers.⁹³

Workmen's compensation has also troubled the Department over the years. Claims were reviewed by the Workmen's Compensation Board, but the costs were assessed against the Department. Lands and Forests have tried to keep these costs down by making their employees fully aware of safety practices; but over the years, with more men employed, such costs have tended to rise.⁹⁴

Procedure for adjustment of grievances is also of concern to the Personnel Branch. Before 1944 the Civil Servant had no right of appeal against dismissal; but in that year the creation of the Civil

Service Appeal Board and of its successor, the Civil Service Board of Review four years later, gave the employees this right.⁹⁵ With the setting up in 1959 of the Public Service Grievance Board, superseding the Board of Review, employees also gained the right to appeal, not merely dismissals, but also conditions of employment and classification.⁹⁶ Nowadays most grievances are solved within the Department before they get to the Board.⁹⁷ The Department takes the sensible view that grievances are problems to be solved, not just contests between employer and employee; consequently, its relations with the Civil Service Association of Ontario are good.

In 1957 Personnel was separated from the old Division of Operations and Personnel and two years later became a Branch.

19

MANAGING AND CROPPING THE FOREST



In 1854, A. J. Russell, Crown Timber agent at Bytown, prophesied that much of the northern timber land “must forever remain a forest country, of which its timber will continue a staple all the more valuable for its becoming scarce elsewhere.”¹ With the reorganization of 1941 the Department finally became officially committed to carrying out the implications of Russell’s prophecy. Specifically, the achievement of a sustained yield from a forest managed with increasing care given to the individual tree by a professional service became the declared goal of the Department.

To that end the new Timber Management Division undertook to do more than handle the sale of licenses and timber areas, as its predecessor had done. It began to attack the problems of managing

all the Province's timber land, a task that soon emphasized its lack of trained personnel having "the experience or maturity to conduct negotiations with large operators in the field."² This lack of trained personnel was the most immediate problem and the most difficult to solve; but, without making headlines, numerous measures were taken during the war years to control woods operation better and achieve more effective management. By 1946 the new Forest Ranger School at Dorset was training field personnel. In an attempt to stabilize the sawmill industry, a limit was set to the size of new sawmills in the Province, while efforts were made to ensure that existing mills were allotted adequate supplies in their neighbourhood. A standard manual of scaling practice was published, the first since the adoption of the Doyle Rule in 1878. Within the Department the lack of communications that had clogged operations in the past was remedied by the distribution of circulars concerning general information, policy and technical matters. These also helped to establish an administrative standard throughout the Province.³

One of the first problems tackled was how to control the management of woods operation. A circular issued July 2nd, 1941, instructed district foresters to submit advance information on woods operations for the coming season. This meant that information previously submitted piecemeal now had to be consolidated in order to help the Department obtain a much needed overall view of the forest situation on a year-to-year basis.⁴

Another early circular outlining methods of negotiating agreements for pulp concessions marked an important step in Hipel's and MacDougall's efforts to make it clear that the Department was not being run by the timber interests.⁵ The importance of the agreements is illustrated by the fact that between 1934 and 1938, out of an average annual world pulp production of twenty-two million tons, Ontario provided six per cent, or one million, three hundred thousand tons, chiefly under the agreement system. The agreements were renewable contracts between the Crown and pulp companies that allowed the companies to cut pulpwood, and sometimes other timber, in a particular area. They were valid for twenty-one years, a period considered sufficient for the company to liquidate the fixed investment of a mill.

Since the agreements covered such great areas, involved huge investments over a fairly long period of time, and represented such

an important development in the provincial economy, they were negotiated in Toronto and in strict confidence. The companies concerned were pulp and paper mills or large sawmills; and the agreement would only be arrived at after protracted discussions passing through several stages. First, meetings would be attended by officials of the Department and would be fully recorded. While this was going on, the officials would look into the financial status of the company and establish whether it could be offered the necessary timber supplies. Once an understanding in principle was worked out, solicitors for the Department and the company would begin drafting and redrafting an agreement which would meet the needs of both parties. After ten or twelve tries a suitable contract would be arrived at and would be submitted to the Executive Council for discussion and acceptance or rejection. "Throughout the discussions," the circular points out, "all Departments . . . concerned are consulted. Thus the agreement that appears in final form is the result of study by all officials of the Department . . . and by every other government department and finally by the Government as a whole."⁶

Steps could be taken to ensure that negotiations leading to agreements were completely documented. But nothing could be done to eliminate the relatively arbitrary way in which the timber holdings were disposed of. This is a problem that confronts every attempt to plan economic development; a limited resource has to be distributed amongst potentially unlimited users. Once the resource has been set aside for a particular use over a long period, the administrator has to stand by the decision and ensure that the users of the resource live up to the terms they have agreed to.⁷

Another form of disposal, the permit, was introduced in the districts. This was a licence to cut timber having a value to the Crown of \$500 or less, which could be issued by the district forester to local operators. The purpose of such permits was to eliminate the many appeals of small operators to head office and to the Legislature that had been the custom in the days when Toronto was the centre for all timber sales.

A third form of disposal, the competitive sale, took place only after a lumberman or company expressed interest in a particular limit. If the limit could be sold, it would be advertised for sale and tenders called for. When the sale closed, the Timber Division would analyse the bids and prepare a recommendation for the Minister and

Deputy Minister to approve or reject on the basis of the facts submitted. Usually the timber would go to the highest bidder; but on occasion it would be clear that "an impossible price" was being bid by a man who had no intention of operating the limit. When that occurred the bid would be rejected.

All steps in each of these types of sales had to be properly recorded and when a recommendation of the Division was not agreed to the reasons had to be stated. The final contract was then deposited in the district office; and the field organization and head office had to maintain a constant watch over the operator to ensure that its terms were kept.⁸

Though the developments in the war years cleared the way for future expansion, they aroused little comment outside the immediate circle of those involved. The war made it difficult to implement the costly changes that could eventually bring about a properly managed forest. Personnel and equipment were scarce, while operating companies, grappling with a severe labour shortage that was only partially relieved by the employment of prisoners of war, were failing to meet production demands and could not undertake the management schemes the Department hoped gradually to introduce.⁹ Harmful management practices, such as highgrading in accessible areas and lightly controlled multiple-use, had to be tolerated in the interests of supplying Canada and her allies with the materials of war.¹⁰ A further problem plagued policy makers: would the end of the war boom bring a recurrence of the *malaise* experienced by the pulp and paper industry during the 1930's? Many feared it would, and if they were correct the Government would have to consider implementing policies far more extensive than forest management.¹¹

However, by the end of the war, experts found reasons for thinking that, although the pulp and paper industry was "peculiarly susceptible to over-development . . . considerable expansion of production is warranted."¹² Furthermore, they predicted a continued demand. The war itself was responsible for this changed situation. After the First World War Canadian production had been disastrously challenged by European producers able to take advantage of lower wage rates and a very high premium on the funds of the United States, the main buying country. These advantages no longer existed. Damage to mills during the war and excessive use of wood

for fuel, had left the industry in Europe unable to compete. In addition, some of Canada's natural advantages, such as her vast forests and cheap hydro-electric power, had asserted themselves. The over-expansion of the 1920's gave Canada the means to capitalize on the post-war boom. A reputation for quality and dependability, together with a record of "maintaining supplies in large volume at fair prices during a difficult period" had won back customers lost during the depression. Finally, the efficiency of pulp and paper mills was being raised to much higher levels, and new uses for pulp and wood fibre were being developed.

Such forecasts convinced the Government that plans for implementing management controls could be pushed forward without fear of disrupting the forest industries. In October, 1945, the Deputy Minister advised the Minister that:

From all available studies, it would appear that we have made enough general progress in forestry in Ontario on our present budgets to bring forest management to the stage it should be for permanent forest cropping and for sustaining the pulp and paper and lumber industry. We should be spending ten to sixteen million dollars on forestry in this Province. A policy should be determined for an annual increase in budget, so that we will reach a figure in excess of ten million dollars within the next five years. This would permit us to complete our post-war plan for improvements, to bring the forest protection system up to date and to carry forest management into our most valuable timbered areas.¹³

Another factor made action imperative. As the war ended, veterans began entering the labour market in a steadily expanding stream, a part of which was flooding the schools of forestry and the ranger school. If the Department could offer attractive jobs to these men, it would soon be able to undertake a complete inventory of the Province's forest assets and, by strengthening its field organization with a corps of highly trained men, supplemented by a large force of ranger school graduates, would be able to enforce management schemes in the field.

However, as the Department moved to take advantage of these developments, events in the political world threatened to disrupt its plans. Distracted by the war, the people of Ontario had failed to

notice the quiet reorganization of the Department, though interest had flickered briefly during the election campaign of 1943. At that time the Conservative platform proposed the establishment of a Forest Resources Commission like that suggested by the minority report of the 1939 Committee. Once in power as a minority government, however, the Conservatives found that under Hipel's administration the health of the Department had improved since 1939; and they limited their reforms to cancelling certain of the agreements that had raised such high hopes when they were first announced in 1937 and so much criticism a few months later. The status of these agreements had been reviewed in the dying days of the Liberal administration, when they were judged to fall into three categories: "those that were genuine attempts by people in the know-how of the pulp business to erect mills; those that were straight promotions; and some borderline cases . . . The Government tried to sort them out and see on which ones progress could be made, but as no mill had actually been built or started (Lake Sulphite excepted) notices of default were sent to all." When the Conservatives came to power all was in readiness for the cancellation of agreements covering more than thirteen million acres of forest land. Some, such as the Sault Ste. Marie, Sioux Lookout and Kenora promotions, were cancelled outright and some conditionally. Work then proceeded to bring to completion those agreements, such as the Kimberly-Clark and Marathon contracts, that "looked as though they could make a successful venture." By 1946 the Government could tell the Legislature that Kimberly-Clark was building a new mill at Terrace Bay; Marathon was doing the same at Peninsula; KVP had taken over the old Spanish River mill at Espanola and was refurbishing it; and the Brompton Mill was operating on the old Lake Sulphite site. Mindful of the criticism Peter Heenan had drawn upon himself through neglecting to investigate thoroughly the financial background of the companies signing the agreements, the Drew Government carefully apprised the Legislature of the pedigrees of the companies, which were reported to be spending more than fifty million dollars on the expansions.¹⁴

The cancellations, however, were the new Government's only spectacular activity in a Department it had criticized vigorously while in opposition. This seeming vindication of the former administration disappointed some party members, who urged that more

extensive measures be taken and, in particular, that the Department's system of administration should be replaced by a commission free of political influence. A lively debate then arose within the Government over the rival merits of the two forms of organization. Those who feared that the Minister's extensive powers made the Department too susceptible to political influence were amply supported by historical evidence. Their critics argued, however, that the creation of a commission would not automatically remove the threat. If the groups using the forests ever gained control of such a commission, their influence would be far harder to remove than it would be in a Department whose Minister was responsible to the Legislature. When legislation was approved authorizing a commission, it seemed that the defenders of the Department had lost; but no commissioners were appointed and the argument continued.

Rumours of the dispute drifted into the Legislature, where they aroused interest. Opposition Leader Jolliffe, of the C.C.F., remarked on the "air of mystery that surrounds the whole business," and reminded the members of the Legislature that they had passed on the Government's urgent wish to bring the industry under co-ordinate direction. "So far," he charged, "I have not been able to discover any forest resources commission."¹⁵ And so it went. The Opposition repeatedly chided the Government for being dilatory; and within the administration the two factions marshalled facts and figures to prove that one or the other scheme was the better. When Drew called an election for June 4th, 1945, the stalemate proved embarrassing and though the Conservatives were returned to power, it was clear that action of some sort had to be taken.

In addition, quarrels between the various forest users were becoming increasingly loud and unmanageable. In theory, to achieve sound management each operator should cut those trees most suitable for his industry – be it pulp milling, saw milling or veneer work – from each stand. Without complete utilization of this sort local industry could be robbed of the opportunity to diversify; unwanted and uncut trees could be left in the bush, to seed an undesirable crop or simply fall and become a fire hazard. The many proposed solutions to the problem had foundered on the unwillingness of major operators to share their limits. Most of these were pulp companies anxious to maintain for as long as possible accessible supplies of pulpwood. As the saw-log industry had become increasingly cramped

over the last few years, repeated quarrels had broken out and, now that the controls of war time were being removed, these threatened seriously to disrupt the administration of northern Ontario.¹⁶

The Government had two alternatives: it could implement the recommendations of the minority report or it could order that a new study be undertaken. Several arguments favored the latter course. The Government itself was far from unanimous in its support of the commission scheme. Many of the conditions that had led to the original recommendation had changed during the war. Further, the Department had been re-organized from within and was in the process of launching new and much needed projects. Finally, a Royal Commission of Enquiry could both present an up-to-date picture of the forest situation, and permit public examination of the Department's new policies.¹⁷

As Commissioner the Government chose Major-General Howard Kennedy, a man whose reputation for sound judgment and impartiality was well known. He quickly assembled a staff which included six forest engineers and an expert in business administration, and by May 6th, 1946, less than two months after he had undertaken the task, his inquiry was well launched.¹⁸

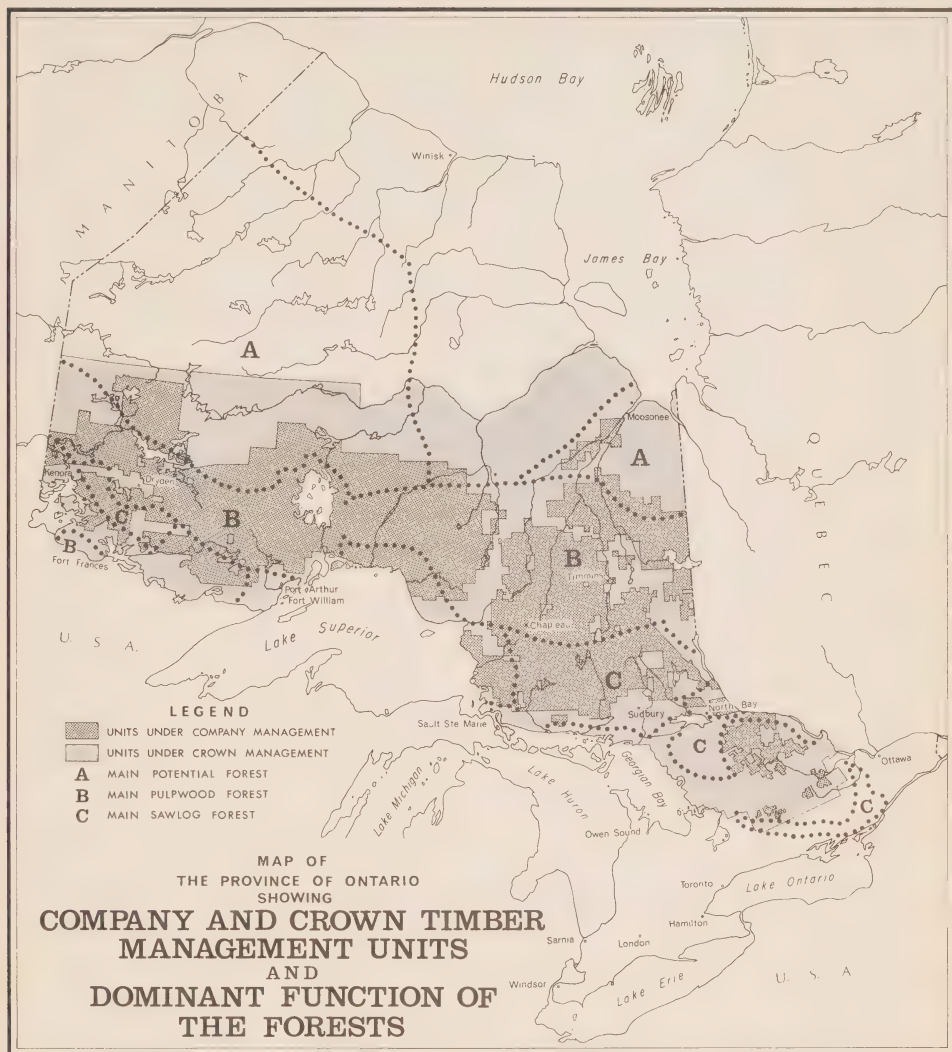
The Department's initial response to the Royal Commission was extremely cautious. A succession of investigations had made it wary; and at this particular moment many feared the disruption and destruction of the projects they had planned as the first steps to a properly managed forest. Kennedy soon set aside these fears, and when he forsook the committee rooms of Queen's Park, the traditional home of such inquiries, to study operations in the field, he won the complete support of all concerned. Another encouraging sign was the inclusion of several foresters on the Commission; but more important were the terms of reference. They proclaimed that the Commission was dedicated to implementing the "sound forestry principles" that many foresters had advocated almost desperately for so long. Members of the Department found that this first favourable impression was borne out by the Commission's activities and they soon began to present their ideas to Kennedy and his assistants.¹⁹

Kennedy's report firmly opposed the establishment of a forestry commission. He recognized that a Government or a Minister could always nullify any policy or legislation, however worthwhile, but

questioned whether "commissions are infallible or that their members can survive unless their policies are essentially in conformity with the view of the administration." Ontario's experience with commissions had not always been a happy one. "After all," he pointed out, "the Administration of the day is responsible for the care of provincial resources and it cannot escape its responsibilities for the forests by delegating matters of policy and management to a non-elective commission." When all was said, the established departmental system was still the most responsible one and had served the public best.

But to create a check on the arbitrary and irresponsible use of ministerial power, and to ensure continuity from one Minister, or ministry, to another, Kennedy suggested establishing an Advisory Committee composed of representatives of educational agencies, professional groups, labour, transportation and the industry. Properly equipped with a secretariat, and authorized to meet regularly, such a group could not only proffer useful advice to the Minister, but could also raise with him questions of Departmental policy. The Minister would not be obliged to accept such advice, but he could derive considerable benefit from its ideas and reactions to policy decisions. The suggestion aroused much support in various circles and an Advisory Committee was created under the chairmanship of Dean Sisam of the Faculty of Forestry, University of Toronto, with Kennedy as a member.²⁰

Apart from dealing with the forestry commission question, Kennedy's report ranged over many problems within the Department's jurisdiction; but its most important and most useful recommendations dealt with timber administration. His lengthy survey of Ontario's forest problems led Kennedy to conclude that "unless the public is willing to spend large sums of money on forestry in the next quarter-century, efforts towards improvement, or even maintenance, of the present forest conditions, will continue to be little better than a gesture."²¹ He bitterly criticized the "tremendous, almost incredible waste" he found in single purpose operations; in forest road construction and inefficient cutting; in the flooding of great tracts of standing timber for power dams and in grinding valuable sawlogs into pulp. Many timber agreements, reached without reference to forest conditions, had given some branches of the industry too much timber and had starved others. A logical and



economical development of forest resources had been neglected, because no-one had insisted that each watershed should feed its own industry alone, and many limits had been awarded to men who could not be trusted to provide for the future. Too few company executives properly understood or visited woods operations; too much was left to piece workers who sacrificed the forest to meet production quotas; saw mills, bound by traditional operating techniques, squandered mill wastes which could be used in other plants. The saw millers, the pulp companies and others were too busy quarrelling with each other to realize the value of what they were wasting.²²

Government techniques of management needed reform as well. He recommended replacing the outdated and costly Doyle scaling rule with a cubic system; standardizing and simplifying revenue charges; eliminating speculation in timber limits by strictly tailoring resources to needs; and imposing profitable export duties on the gradually decreasing amount of raw wood shipped out of the country from Crown lands. Field control was still well below what could be achieved, Kennedy reported, though some improvements had been made. Field officers were better qualified than they had been and they were conscientious; but they were still too few and were visited too seldom by senior head office personnel. It was worthless to require operating companies to manage their limits properly, if the field staff was too small to enforce the regulations.

The controls themselves were many, varied, diffused and so often in conflict with one another that ignorance of the law threatened to become unavoidable; while some controls, such as the Forest Resources Regulation Act, had proved too heavy-handed to be useful. They made it impossible, Kennedy stated, to plan for the rational development of forest resources and perhaps even impossible to maintain existing industries. Once again Kennedy blamed the agreements with the major pulp and paper producers which, he stated, contained such varying conditions that it would "never be possible to apply any overriding regulations which would standardize them to any considerable degree." Too often they reflected keen bargaining between Government and industry and were very one-sided. At times, too, they conflicted with established Government policy, such as the prohibition of pulpwood export; but their worst feature was their assumption that Ontario had large tracts of virgin timber still

to be exploited. This, said Kennedy, was quite wrong. Only the Patricia district, far to the north and difficult of access, could offer such areas. Unless industry and Government recognized this, no-one would seriously support reforms in forest administration.²³

Kennedy based his recommendations on the same basic objective the Department had adopted: that of achieving a sustained yield.²⁴ This meant managing the forests so that the amount of timber cut each year should always be replaced by new growth. It meant applying forest regulations to all equally; encouraging those who aimed at sound silvicultural practice; removing all useable species up to the limit the market could absorb; and starting new growth on cutover areas "equal to or better than that removed." Without such a policy a continual lowering of the forest's quality would be inevitable.

To bring this about Kennedy proposed a "completely new concept of all allocation and operation of Crown lands." His solution, as he warned, was no half measure. He recommended suspending all licences, agreements and permits for at least ten years and, by pooling all Crown lands resources, assuring the industry of adequate supplies. Eventually all timber areas would be redistributed in a rational fashion, according to watersheds and company needs. To ensure their effective utilization Kennedy proposed that one company crop each watershed and distribute the cut to the various dependent industries according to a complicated formula. In operating the watershed the company would guarantee local concerns the same amount of work as they had had under the old system. A board of directors would be appointed to represent the users and the provincial Government in such a way that no one group could dominate the board.

Kennedy foresaw several advantages for this system. Forest management would be simplified by devolving management plans on a watershed basis, and by standardizing dates and returns to facilitate comparative evaluation of the forest situation from one region to another. Mill executives, "who normally know little or nothing of the inescapable effects of unsound forest practices and are mainly concerned with immediate costs," would no longer be able to apply their shortsighted policies. Effective management by highly trained personnel would guarantee to each user the quantity and type of wood he needed, and ensure that each stand of timber would be utilized to the highest possible degree. Many other problems would

be eliminated through this scheme, while costs generally would be reduced. Anticipating strong resistance to the proposal, Kennedy closed his report with a stout defence of the scheme's practicality: "To those who are well satisfied with forestry matters as they are, it may come as a shock. I believe such people need a shock." His study had convinced him "that it is necessary to protect a probable majority of operators against their own folly in wasting forest resources . . . I therefore recommend that the principles, if not the details, be adopted."

The idea did arouse considerable debate within Government and industry. In the Legislature the Government was not on the whole enthusiastic, while the C.C.F. members proclaimed themselves very much in favour.²⁵ Opinion was divided inside the Department. To a professional forester many of the advantages of such a system were obvious, but it was also clear that "mandatory formation of timber operating companies is not the solution to the problem."²⁶ The plan depended largely on the willingness of the interests concerned to give up their timber holdings to the new companies. If they would not do this voluntarily, the Government would have to use coercion, an extreme which would never be used if a viable alternative existed. Eventually the Government concluded it would support the idea of consolidating woods operations and "stand ready to use its good offices in bringing together parties . . . who are concerned with the formation of such organizations."²⁷ Industrial leaders, many of whom believed the companies would be wholly government-controlled, were almost unanimously opposed. Those who did attempt to pool their woods operations soon found themselves quarrelling over the better stands and reverted to their former methods.²⁸ The plan was not instituted, although the spirit of the recommendations was carried out. The development of logging roads made the watershed idea less important than before; but Kennedy's emphasis on the co-ordinated use of limits gave impetus to the re-allocation of concession areas, once a provincial master plan had been approved.

Altogether, Kennedy's recommendations numbered seventy-two, some of them minor, others with sweeping implications. The Department set about studying the suggestions and drew up a list of "Recommendations and Answers" which, by 1965, indicated that an appreciable number had been put into effect. Nearly twenty years after his inquiry General Kennedy estimated that about eighty per

cent of his recommendations had been carried out; operating companies were more firmly regulated, export had been extensively curtailed, the Doyle Rule had been replaced and Ontario's forests were closer to being managed on a sustained yield basis.²⁹

Not all these changes were the result of the Commission's recommendations. The Department's records show that many were in the planning stage while the Commission was sitting, and a few came to fruition at that time. Nevertheless, in its total effect, the Kennedy inquiry had an important impact on the development of the post-war Department. It publicized the objectives of sound forest management; it supported those who were anxious to institute management schemes and it generally endorsed the new administrative techniques of the Department. Even as the Kennedy inquiry began, a series of reports was being prepared in the Department that supported the conclusions he was to come to. Thus, in February, 1946, a circular prepared by the Timber Management Division stated the basic aims of a management policy designed to keep industry in business and to support its dependent communities.³⁰ Referring to the agreements that dedicated some thirty-five million acres of forest land to pulp and paper and lumbering concerns, the circular recognized that they had for the most part been intended to maintain production or at least equitably distribute the available timber amongst the dependent users; but pointed out that they were not based on precise knowledge of the areas allotted, but only on indications that sufficient supplies of timber existed. To achieve a better balance between the timber supply available and the quantity needed by industry, the Department had to know more about the resources at its disposal. To that end it was formulating plans "for a more complete forest survey coverage of the province to provide facts upon which to base future . . . management plans that will show how the cut should be regulated and the productive capacity that should be installed to utilize the cut." Proper rationing of supplies was to be the first essential step to bring about timber management. When this had been done, the problem of reforestation would have to be tackled. The forest had to be kept at a high level of productivity by Government and industry working together.

The information on which the circular was based pointed to a potentially grave situation: the forest was not being completely utilized. Unless it was more fully utilized in the near future, it was

quite possible that in years to come a severe shortage would develop as the result of a glut of useless over-mature timber. A statement prepared in December, 1945, established that though "Ontario is under-cutting the forest at the present time in all species . . . more accessible areas are being cut now and . . . some of the more favored species are being excessively cut." In the main pulpwood-producing regions the allowable cut was estimated at three million cords of spruce and balsam and a million cords of jack pine; while in the 1945-46 season only one million seven hundred thousand cords of spruce and balsam and one hundred and ninety-five thousand cords of jack pine were being cut.³¹

Much of the land that produced the timber was held by major pulp and paper companies who might act of their own accord to correct the situation; but on the nine hundred and thirty small timber holdings, each containing anything between a quarter of one square mile and five hundred and twenty square miles, the situation was indeed serious. The number of interests involved, as well as great technical difficulties, had prevented the development of forest management from keeping pace with the need. This was especially so in the older or more accessible districts, where most of the small holdings were. There the responsibility for planning and regulating production had to fall on the Government, which had to suggest steps to alleviate the more urgent difficulties. Cutting would have to be restricted to mature and over mature timber, integrated forest operations promoted, rigid inspection endorsed in the bush and steps taken to ensure regeneration after cutting. But the only real solution was complete management; and that could not be introduced until a forest inventory had been taken that would enable the Department to know precisely what the Province's forest assets were. Such a project had long been an ambition of professional foresters and the Forestry Branch had started an inventory in the 1920's; but the information slowly accumulated by teams of forest survey crews over a succession of summers had provided only a general picture. This information, though valuable, was not precise enough to be used in drawing up management plans for specific areas; so the goal of taking a detailed inventory was included specifically among the aims of the 1941 reorganization.³²

When the war ended the scheme was given priority and placed under the direction of J. A. Brodie of the Timber Management Divi-

sion. Tenders were called for and by June 1st, 1946, the Photographic Survey Company was producing aerial photographs and planimetric maps of one hundred and twenty-five thousand square miles of Ontario's surface. Another fifteen thousand square miles was to be accounted for by the Department's own staff. This area included all the then accessible forest land in the Province, extending from the Kawartha Lakes in the south to a line sixty miles north of the C.N.R.'s transcontinental line. While the aerial survey planes criss-crossed the forest lands, the "F.R.I." (Forest Resources Inventory) offices on Wellington Street hummed with activity. There a group of foresters were joined by a larger number of young men fresh from the armed services, all of whom wanted something more than a humdrum office job. Armed with aerial photographs and base maps, they set off for the bush each spring in parties of six – five cruisers and a cook – with everything from stereoscopes to axes and tin stoves that they would need for a sojourn in the unsurveyed portions of Ontario. Travelling by aircraft and then by canoe, they often went more than a month without sight of a strange face. Day after day, taking it in turns to be cruiser and tallyman, they walked by compass from camp or canoe deep into the forest. Often the first men to go there, they laid out tenth-of-an-acre plots, measured trees and tallied species. Plots were marked by pinpricks on the aerial photographs, while notes on the stand content were jotted on the back and later, during the winter months, classified and typed on to large four-inch-to-the-mile maps. By April, 1947, a fifth of the area had been photographed and planimetric maps of four thousand four hundred and twenty-nine square miles had been delivered. Type maps covering an area of three thousand six hundred square miles were ready for field checking, final checking and completion of the inventory by the time the field operations resumed that summer. By 1951 the contractor had photographed 127,472 square miles and the Department 27,203 square miles. More than a hundred and fifty thousand photographs had been taken. The operation was judged sufficiently successful to warrant its extension to cover 284,906 square miles and thus include southern Ontario. In the same year the federal Government entered the project, paying one half of the cost.³³

Such a programme was not a one-shot effort. Once a definite picture of the Province had been produced the people of Ontario knew,



Modern tree harvester at work topping a tree near Port Arthur

for the first time, what their forest resources were. But the Department had continually to update the base maps to keep abreast of topographical changes caused by fire, cutting, dam construction, alterations in the courses of rivers, development of new towns and – especially important – the growth of forests.

These were years of intense excitement for Ontario's foresters, as they tackled the problems of forest management that the inventory at last made a practical possibility. Professor D. M. Matthews, of the University of Michigan, was hired on a consulting basis to help the Department through this crucial stage. A man of considerable vision and great ability, Professor Matthews had had world wide experience in administering, utilizing and studying forest resources. In the two and one-half years before his death in 1948, his advice and suggestions exercised a permanent and far-reaching influence on Ontario's forest policy.³⁴ Even as the inventory was being pieced together, other measures were being taken to ensure that by the late 1950's the whole policy could be effectively executed. Management units were established first at Kirkwood, at the site originally set aside by the Forestry Branch in the late 1920's, and then at Severn River, north of Orillia. Such units, it was hoped, would gradually be extended to cover all unlicensed Crown forests as soon as technically trained men became available.³⁵ At the same time the field organization was strengthened to a point where it was capable of supervising the forests' users.

At another level a tussle occurred between the Government and industry over the former's demands that each company submit plans for the operation and management of its limits. The requirement that operators receive Departmental approval of their plans before the cutting season began had appeared in agreements before 1940; but Departmental control and its knowledge of the areas involved had been so inadequate that the procedure was often only a formality.³⁶ Also, none of these provisions had envisaged the long-term management plans that were now being suggested. To the Department the advantages of such plans were very clear. With a knowledge of the quantity, conditions and growing capacity of the timber available, it would be possible to budget present resources amongst the various users and at the same time ensure that the growing stock would be so regulated that a normal stocking and yield could be achieved. The orderly development of improvements

in new areas would be possible, while a proper balance would be achieved between the production capacity of the timbered area and the manufacturing capacity of plant and equipment. The industry, too, would benefit, since a stable forest situation would permit companies to invest in areas with confidence that the timber they had counted on for future use would not suddenly be allotted to a competitor or gradually depleted. Proper controls, too, would bring an end to wasteful speculation in forest assets. In short, management plans would permit a stable forest economy to thrive on a resource that would no longer be treated as a wasting asset.³⁷

The breakthrough occurred in the agreement reached with the Abitibi Power and Paper Company. This company had been in receivership for more than a decade. Beset by difficulties and frequently the centre of controversy, it was finally being brought to an effective reorganization. During the long negotiations between the company and the Government for concession areas to supply the mills, the Department insisted that the company accept responsibility for undertaking proper management of its limits. The issue was the most controversial of the negotiations and the company tried hard to persuade the Government to accept a clause "which would, in effect, let the company and not the Government decide how the forests in the area would be managed."³⁸ Finally, however, the shareholders were persuaded to approve an agreement that provided for a management clause acceptable to the Government. In March, 1945, the company formally agreed that within five years it would submit to the Minister, "an estimated inventory . . . of the timber on the concession area by species and size classes and information with respect to the forest types and general age-classes of such timber."³⁹ A map incorporating this information and specifying long-range cutting plans would also be submitted and, together with annual operating plans, would have to receive Ministerial approval.⁴⁰

With one major company operating under these conditions, it was easier to induce others to accept similar controls. Eventually, in 1947, legislation was introduced to provide that all companies should be "on an equal footing in their management obligations."⁴¹ The new Forest Management Act provided for the submission of plans and maps similar to those required of the Abitibi Company and stipulated that once such a plan was drawn up it would have to be

approved, perhaps with alterations, by the Minister and the company would be required to cut in accordance with it, even if it differed from the terms of the license or agreement. Plans submitted annually had to have the approval of the Minister, who could impose changes even if they necessitated alterations in the master plan. He could also cancel an agreement or license, or stop operations, if a company did not comply with the Act or the regulations passed under it.⁴²

Following the passage of the Act, the Timber Division assigned M. B. Morison, a forester who previously had had considerable experience with the Dominion Forest Service, to supervise the submission of management plans to the Government and to prepare a manual for distribution to the companies concerned, advising them of the minimum requirements to which they would have to work. He was also to cooperate with them as they drew up their plans and, once they were submitted, was responsible for analyzing them and for putting into effect "the controls necessary to assure the application of the plan as approved by the Department." Though there was a shortage of trained foresters able to prepare company plans, a substantial number of such plans were submitted and these provided an "indication that the industry (was) prepared to cooperate."⁴³

A year later the Department reported that issuing the management plan manual had paid off. More satisfactory and uniform reports were being submitted and most agreement holders were actively engaged in the preparation of forest inventories and management plans.⁴⁴ Though the lack of personnel was still a problem, it was partially offset by the photographs and maps acquired through the forest inventory scheme, which speeded up the surveys each operator had to undertake before he could compile his plan.

The submission of the plan by the company was only the first step in an involved process. Once it reached the Timber Management Division in Toronto, a group of foresters working under Morison analyzed the company's suggestions and gradually worked out a management scheme that was acceptable to it and the Government. As a larger and larger extent of the Province's forest land came under management plans, additional foresters were attached to the field force. Gradually responsibility for analysis and control of the plans was decentralized and these men took over most of the duties

involved. By March 31st, 1950, twenty of the sixty-nine companies required to do so under the Act had provided plans for an area of fourteen thousand seven hundred and seventy square miles.⁴⁵

The field organization was made more effective by special courses in stumpage appraisal, intended to give both Departmental and instructional foresters "the technical foundation required for determining relative stumpage values under varying conditions." Foresters and assistants in the districts helped organize management units and maintained the forest inventory where it had been completed. Additional field inspections and extended requirements under the Forest Management Act provided better control of forest operations. New timber sales were put under closer inspection and gradually restricted to cutting under the management plan. Standardization of procedure for submitting annual cutting applications, the district forester's report on timber sale applications and the reports of inspectors and scalers facilitated the handling of these matters in the Department. The monthly reports dealing with cutting operations, with their constant checks on each logging camp, exerted a great influence and improvement in cutting practices.⁴⁶

By 1951 the Minister approved the management plan for the Petawawa Management Unit. Work on this plan had begun in 1945 and its institution represented an important step forward, since the Petawawa Unit was the first to cover an area of commercially operable timber. Previously, management plans put into effect on lands administered by the Department – at the Severn and Kirkwood units – had been in the nature of "rescue operations", attempts to capture whatever could be saved from the depredations of the past before a weedy second or third growth completely destroyed an area. The fine, healthy, mixed stands coming to maturity on the Unit's six hundred thousand acres were, in contrast, ready for utilization by the industries clustered near the mouth of the Petawawa River. Within the year "the cooperating companies . . . demonstrated their ability to work under regulations which provide for the protection and development of future crops on the same area on a comparatively short cutting cycle."⁴⁷ The policy behind the Petawawa scheme was a desire to use the mature trees on the area while encouraging the accelerated growth of pine and increasing the growing stock of red and white pine. Access to the area was to be facilitated by the construction of a road system. The whole operation was intended to assure regular continuity of supply.



Red pine plantation thirty years old, thinned for pulpwood, 1954. At St. Williams, Lake Erie District

Elsewhere, elaborations in the procedure for dealing with management plans were carried forward. The plans, once submitted, were subjected to repeated revisions, as more accurate information was added to the basic data acquired in their compilation. They were submitted from three sources: the pulp and paper companies holding vast concession areas; the Department itself; and operators holding limits of fifty square miles or more within the Department's own management units. The number of management units has varied somewhat over the past decade and a half. In 1954 there were a hundred and twenty-three, of which thirty-six were formed by large timber licensees and the remaining eighty seven were treated as Crown units, though within them operators holding fifty square miles and more had to supply management plans.⁴⁸ At the end of March, 1966, provincial timber lands were divided into one hundred and forty-eight management units, excluding agreement forests – a figure subject to change as abandonments, acquisition of licences, divisions and consolidations in periodic plan revisions played their part in a dynamic process.

When the forest inventory was first begun, it had been decided that complete re-inventories would be taken at ten year intervals. This “perpetual inventory” was intended to avoid the type of miscalculation experienced by other countries as a result of basing long range plans on a single inventory. The re-inventory started in 1957, together with the results of a gradual refinement of methods of implementation that occurred during the first few years of operation, contributed to revisions of management plans. At present, within a year and a half of re-inventory, district staffs prepare a revised management plan designed to operate for twenty years. At the end of this time further revisions will be carried out following re-photography, re-inventory and assessments of experience gained under the former plan. Management has to be based on the objectives that the Department's predictions suggest will be aimed at a century from now. The plans have to take account of factors such as the mixtures of the various species in the forest and the distributions of the age classes. Plans have to be made to guarantee that all parts of the forest become accessible. Into this framework ten-year operating plans are fitted to indicate in greater detail the stands to be cut, regenerated and tended, the roads to be built and the other improvements to be made.⁴⁹

With the advent of management planning the Department first entered into the complexities of forest administration suggested by the foregoing description. Basically the practising forester's task is simple; to produce the largest crop of the most desirable species in the shortest possible time. He knows that an acre of land will produce a certain quantity of wood, and that by thinning, applying fertilizer, or using any other silvicultural treatment, he can raise the level of production to a position dictated by the technology and the manpower at his disposal. He knows that the growth-rate of a tree slows as it reaches maturity until it no longer uses the full growth potential of the land it stands on. When this occurs the tree should be cut, since it is preventing the realization of the full growth potential of the site. Consequently, the forest manager tries to thin and prune his young trees so that they grow at the maximum rate; he cuts them when they reach maturity and starts a new crop as soon as possible. Theoretically, on a sustained yield basis an area which supports a pulp or saw-mill in perpetuity should have trees reaching maturity each year – the annual cut being equivalent to this harvest. If the trees cut each year on ten thousand acres could support the annual output of a mill and the mature age of the trees was one hundred years, then one million acres would be needed to support this mill in perpetuity.

All of this raises a problem, however, the problem of prediction. In every phase of industrial and governmental activity the need to predict raises peculiar and sometimes insurmountable difficulties. Nowhere is this more evident than in the field of forest management. It takes a century to grow most of the species that are at present the staple of the Province's forest industry; and this time factor poses two major problems for the forester. On the one hand, he often finds it difficult to convince the public that forest reforms have to be carried out, for the perils he warns against are so far in the future that men are apt to dismiss the warnings. On the other hand, when management is introduced he often has difficulty in prescribing what objectives it should be designed to meet. Most foresters are certain that industrial woods are going to be needed a century from now, just as they are today. But they cannot always state precisely what woods are going to be needed, or in what quantities. Most foresters plan and act today with some certainty that tomorrow will approve; and as more and more is known about the forests and the industries

they feed, it becomes easier to plan effectively. But an element of doubt always exists.

The forest inventory, the institution of management plans and the strengthening of the field staff were important phases of the approach to achieving a sustained yield. Other vital steps included the implementation in April, 1953, of a new Crown Timber Act consolidating and revising eight statutes governing the administration of Crown timber. Its chief feature was a revision of the licence structure so that the old agreements disappeared and were replaced by licences issued by Order in Council, valid for a maximum of twenty-one years and greatly simplified since nearly all the conditions had become standardized in the Act. The Act also imposed penalties on operators using wasteful cutting practices.⁵⁰

The next year the Minister, the Hon. W. S. Gemmell, introduced the first "White Paper" ever put before the Ontario Legislature.⁵¹ Entitled *Suggestions for a Programme of Renewable Resources Development*, it stated that the Forest Resources Inventory provided the base for plans to integrate "the many and varying uses of land for forests and recreation with their use for wild-life; the use of streams and lakes for hydro developments with their use for log driving and fishery management. In short it makes it possible to reconcile the complex relationships between often-conflicting land and water uses."⁵² But it depicted a depressing future for some branches of the forest industry, estimating that existing stands of white and red pine would last for seventeen years at the cutting rate of 1954, and predicting future distress in the saw milling industry. There were even "many indications that the cut of spruce pulpwood in Ontario may soon reach its peak or a position similar to that reached by the white pine saw log industry in 1908. Almost the same forces are at work with respect to the pulp and paper industry and spruce pulpwood as caused the decline of the white pine saw-log industry."⁵³

The situation, the statement continued, had been foreseen and in 1946 a policy was adopted of "maintaining the pulp and paper industry at its present status at least, in perpetuity and at the same time sustain the waning saw-milling industry by all means at its disposal."⁵⁴ By 1954 the first stages of the policy, the forest inventory and the preparation of the working plans on a management unit basis, had been completed. Knowing the extent of the timber resources and the rate of depletion, the Department could estimate

the rate of growth needed to maintain supplies. The next step was to put a sustained-yield management program into effect by adjusting policy, legislation and operations to meet the requirements of the situation.

The White Paper estimated the accessible forest area of Ontario as one hundred and seventy-two thousand square miles with a net potentially productive forest area of one hundred and thirty-two thousand square miles. Forty-six per cent of this area was covered with mature forests ready to be cut and the balance with immature growing forests, including possibly productive areas not bearing trees. Ownership of eighty-nine per cent of the total forest area was vested in the Crown; and the total volume of merchantable timber growing on it was calculated at sixty-two billion cubic feet, thirty-nine billion being softwoods and twenty-three billion hardwoods. The latter consisted chiefly of poplar and white birch, which were not highly valued or extensively utilized; but the softwoods were almost all commercial species and would produce the major part of the forest revenue. Furthermore, utilization of the forests had been concentrated in the more accessible areas of the Province, leaving an excess of mature timber in the more remote sections. The main commercial species, spruce and red and white pine, were being overcut in the more accessible areas, while failure to use surplus volumes further north was causing excessive loss through deterioration in mature and over-mature timber, especially in such species as balsam and jack pine.

The annual allowable depletion for softwoods on Crown lands was five hundred and forty-two million cubic feet and for hardwoods five hundred and twenty-three million cubic feet; but certain species were being overcut while others were virtually untouched. Three-quarters of Ontario's pulpwood cut was spruce, though it formed much less than fifty per cent of the total allowable cut. After cutting, the valuable softwoods were being replaced by inferior species, principally poplar. This condition would continue until forestry practices improved enough to assure regeneration and tending of the growth of the valuable softwood species from planting to cutting. For the moment, analysis suggested that the Province "could only provide for present requirements and normal expansion for a period of twenty years", after which industry would become increasingly dependent on immature stands.⁵⁵

What could be done? The need for improved silvicultural meth-

ods was self-evident, and effective regulation of the forest was possible for all species except red and white pine. However, without careful attention shortages might occur in twenty or forty years in those species, particularly spruce, which were being operated "precariously close" to the limit of the allowable cut. The Province's forests should manage to produce a sustained yield no less than the allowable cut set out in the district reports and management unit plans. To achieve this, the cut of individual species might have to be readjusted; but the full allowable cut should be utilized each year or averaged over five years, to provide for market fluctuations on all commercially valuable species. Some limits might have to be redrawn and consideration given to the suggestion that longer tenure would encourage greater management activity by industry.⁵⁶

Turning to the sawmilling problem in particular, the White Paper pointed out that most of the timber of sawlog size was located on concessions granted to pulp and paper companies; and, though these concessions generally provided for sawlog production, most pulp and paper concerns and pulpwood exporters had been reluctant to divert sawlog-sized material from the manufacture of pulp and paper. Wood used for pulp generally produced a higher value per cubic foot than that of the same species used for sawlogs and usually brought a higher dividend on money invested. Consequently, "in view of the rather parlous situation facing the sawmilling industry and its incidental effect on the people of Ontario, who own the forests but who will be dependent upon distant sources for lumber despite high and rising freight rates, measures will be taken over the next few years to provide for the continued existence of the sawmilling industry within the province".⁵⁷

The "centre of gravity" of some major sawmilling operations would have to be shifted and arrangements made for purchase or exchange of material to feed their mills. Operators in white pine would probably have to shift to other species, at least in part. Long term agreements between operators would be necessary, as annual agreements would not justify the expense of setting up the plants and shipping facilities involved. The saw-logs on unlicensed areas and on pulpwood concessions would probably carry the industry over the period when it would go into eclipse if it waited for the regrowth of the white and red pine stands. The period of low production would occur between 1970 and 1990, unless measures were taken in

the 1950's to prevent it. Much patience and good faith on behalf of both the sawmilling and pulp and paper industries would be necessary; but without such cooperation the only feasible action would be drastic government regulations governing the diameters of the various species to be cut.

Other preventive measures suggested by the White Paper were the prohibition of exports of softwood, maple and yellow birch saw timber in an unprocessed state and the continuation of the ban on pulpwood exports. It might be necessary in some areas to slow down the cutting of mature timber to prolong the life of existing mills until immature growth filled the gap; and everywhere hardwoods being cut would have to be as fully utilized as possible to eke out the supply. All forest operators on Crown lands would have to follow silvicultural practices that would quickly assure full stocking of the medium and better sites of all cutover lands; and stands to be cut in the future would provide for their own replacement.⁵⁸

Reforestation – the replacement of the crop by planting when natural methods fail – was closely related to the whole timber management problem. The number of trees distributed to private landowners would have to be extended and a pilot programme started on reforestation of the white pine region. The supply of trees for municipal and conservation authority forests and for the Department of Highways would be greatly increased and tree planting on unalienated Crown lands extended and vigorously encouraged on private lands.⁵⁹

The difficulties described in 1954 continue today, though there is reason for believing that some of the harsher predictions will not materialize. Some of the estimates suggested in the White Paper have proved conservative, while changes in forest use and treatment, for which it was partially responsible, have improved the cut and the level of utilization. To turn first to the measures to improve management, in 1957 the Divisions of Timber Management and Reforestation were amalgamated under the title Timber Division and thus all phases of forest administration, except forest protection and research, were brought under one roof. At first the new Division had two sections, Timber and Reforestation; but it was soon reorganized as a result of a project undertaken a year before the amalgamation. "Project Regeneration" was a pilot programme of silvicultural work involving application of treatments, such as soil preparation by

hand tool or mechanical means to provide conditions for natural seeding; experimentation with herbicide sprays to eliminate weed trees choking out better varieties; and a change of cutting methods to give young trees a better chance of growing in. Some fourteen thousand acres received a form of silvicultural treatment in the project's first year; and the work quickly became significant enough to warrant supervision by a full section of the Division. The Silviculture Section was established in April, 1959, with responsibility for forest inventory, planning, stand improvement and planting.⁶⁰

To meet the growing pressure on the Province's timber resources, the Department plans to apply silvicultural treatment to a steadily increasing percentage of the annual cutover area. Through an amendment in 1963 to the Crown Timber Act, the Province took back from industry the responsibility for maintaining forest productivity. This represented a major change from the policy incorporated in the first management agreements, that required the companies to assume responsibility for managing the forests so as to ensure their continued productivity. Today the Department has agreements on regeneration with all companies and pays all out-of-pocket expenses involved.

At present some three hundred and sixty thousand acres of forest land are cut over each year; and recent surveys indicate that about one hundred and twenty thousand acres will have to be treated to encourage regeneration. Between 1946 and 1965 treatments such as scarification were applied to 22,960 acres to encourage natural regeneration, 4,835 acres were seeded and 73,267 acres were planted. Regeneration projects, such as scarifying to prepare the seed bed for planting and natural or artificial seeding, form a major part of these silvicultural treatments. Some pruning, thinning and other improvement measures are carried out as well; but at the moment there is insufficient manpower available to apply the intensity of management that will eventually be needed. This condition will continue for the next few years at least.⁶¹

Today Ontario's forest situation is as follows. The productive forest area* of the Province is estimated to be 129,364 square miles.⁶² The Crown owns 113,173 square miles and licenses all but

*Productive forest area = the southern agricultural area plus the exploitable (accessible) forest area. The potential forest is the Patricia region, which is not at the moment economically accessible.

four thousand square miles to companies operating twenty-six pulp mills and nine hundred and seventy-six saw mills. These lands contain some sixty-eight billion cubic feet of conifers and nearly forty-five billion cubic feet of hardwoods.⁶³ The conifer allowable cut on the area is 956,478,000 cubic feet and the hardwood cut 908,162,000 cubic feet. Nearly fifty per cent of the conifer allowable cut is black and white spruce, thirty per cent is jack pine and the remainder chiefly balsam and red and white pine. Eighty-five per cent of the hardwood allowable cut is poplar and white birch, but at present less than five per cent is utilized. Some authorities believe that probably not more than ten per cent will be used in the foreseeable future; but others argue that technological changes and tariff revisions affecting poplar products, such as chip-board, might soon make poplar the most favoured species. The remaining hardwood allowable cut – maple, yellow birch, basswood and others – can be used for veneers and sawlogs. Not all of it is used in this way, because at present the quality of the wood is not good enough. The quality can be improved in the future but even then it would be some time before the cut would rise greatly. At present about forty-four per cent of the allowable cut of all hardwoods and softwoods is used by Ontario's industries. Some two-thirds of it goes into the pulp mills and the remainder feeds the sawmills, veneer mills and so on.

The management of the forest resources presents a three-fold challenge. The first is the long-standing task of bringing the northern pulpwood region to a sustained-yield level of management. The second is the challenge of helping the two branches of the northern Ontario sawmill industry through an important transitional phase. The third is an important new undertaking that aims at creating a strong and competitive hardwood industry in southern Ontario.

The first of these – the challenge of bringing the northern pulpwood regions to a level of sustained yield – is not as monumental as the White Paper of 1954 suggested. The estimates of the allowable cut of spruce, for example, that were given in 1954 have been found more recently to have been far too conservative. A recent report suggests that the allowable cut of spruce and balsam is still higher than the actual cut. Furthermore, the situation has been eased by the development of pulp-mill processes that mean spruce is no longer virtually the only species that can be used.

Nevertheless, present policy is based on the knowledge that too many of the trees in the northern softwood forests began to grow at the same time – a little over a hundred years ago – and today represent a surplus of mature and over-mature timber. This glut could be easily eliminated by encouraging more pulp and paper mills to establish themselves in Ontario. To an extent this is being done. Expansion at Great Lakes Paper Company, Domtar Newsprint Limited and elsewhere will mean the consumption of close to a million more cords annually. But the unrestrained application of this remedy could prove extremely dangerous, because the high percentage of mature and over-mature wood in the forest dictates that the quantity of younger trees will be proportionately less. If too many mills were allowed to locate, they would experience hardship once the over-supply had disappeared. Consequently, at present, a “safety valve” is allowed for in allocating timber limits. In this way it is believed that the industry now existing can pass without difficulty through the period of lessened supply that may come after the present surplus has gone. If silvicultural treatments are carried out on the younger age-class forests, then expansion can occur up to a greater allowable cut. Industry cannot, however, be allowed to expand beyond a point at which future supplies cannot be guaranteed.

This surplus has been an important factor cutting across efforts to impose sustained-yield management on Ontario's forests. For a policy of sustained yield has to depend on the knowledge that the annual product of the forest will be used. This can only be achieved if the trees that are to be cut come to maturity in an ordered sequence.

Two other factors, however, are significant. It is important that the species, particularly poplar and birch, that have often been termed “weed trees”, because they have not been fully utilized, should be used widely in industrial processes. As has been mentioned, such a change could occur almost overnight; but at present these trees, like other varieties of weeds, simply interfere with efforts to cultivate properly the forest. Closely related to this problem is the programme to hasten regeneration in the northern forests. Aerial and ground seeding for 1966 were scheduled to cover nine thousand acres of Crown lands; eighty-six thousand acres were to be planted in the traditional way and twenty-two thousand five hundred acres were to be planted with the new “tubed seedlings” which,

because of the ease with which they can be planted mechanically, represent a major development in reforestation.* If this programme is carried on in the future it "will meet all the requirements in relation to reforestation for existing capacity of our industry and with reserves for the future."⁶⁴

The northern Ontario saw-log industry – the second major area of concern – poses a twofold challenge. On the one hand, the branch of the industry relying on white and red pine has almost exhausted the supply. On the other, the successors to this branch of the industry i.e. the concerns using spruce and jack pine, have to be fitted into the licensing and industrial structure of the Province.

In 1908 the lumber industry cut about one billion board feet of red and white pine. Today only one hundred and eighty million board feet are cut. The industry grew in response to market demand, rather than to the potentially available supply; and suffered the consequence. The lands that had once fed the pine forests were put to other uses and could not produce a second crop, so the industry had nowhere to turn when the first crop approached exhaustion. Today a departmental study suggests that the cut of white pine will remain at its present level until the turn of the century when, as a result of silvicultural measures, it will start to climb slightly and will reach a level of three hundred million board feet by the middle of the next century. The Department is accordingly faced with the problem of helping some units of the industry eke out existing supplies until the young growth is ready for harvesting.

The mills that use jack pine and spruce were built very recently, as a part of what the 1954 White Paper referred to as a "shift of the centre of gravity" of the industry that had to come if it was to survive. Most of the mills were constructed in areas where the available timber was not then required for pulpwood, though some were integrated with pulpwood operations. To survive they had to become increasingly efficient, turning out lumber from logs that are very small in diameter and using the sawmill residues to produce chips that can be sold to the pulp mills. Today they form an important segment of the industry; and only the fact that they are very recent additions to the Province's industrial structure poses a problem for the Department. The problem is that supplies of spruce

*See Chapter 23.

and jack pine have to be provided in areas that had been dedicated almost exclusively to pulpwood operations. Logs suitable for the sawmill have to be diverted from the pulp mill, a measure that demands a flexibility in licensing that has never before been needed. This often necessitates careful and protracted negotiations between the Department and the parties involved.⁶⁵

Only about ten per cent of the productive forest land in Ontario is privately owned. However, its position – close to the marketing centres of southern Ontario – and its ability to produce high quality hardwoods, combine to make the area extremely important. Unfortunately, the southern hardwood forest, once highly valuable, has been cruelly depleted through successive waves of high grading. Today its remnants cluster in bedraggled stands of overmature, poor-quality timber interspersed with younger, but untended growth. Though these stands, or woodlots, are small, averaging about forty acres, and change hands frequently – less than every twenty years – they represent “one of our greatest management opportunities.” Because of the fact that these lands have been held by private owners, Government has only recently begun to play a major role in their development.

In some areas the Department has been active for a number of years. In the development of municipal forests, which today cover nearly two hundred thousand acres, the Department has been able to manage lands owned by municipalities, counties, and conservation authorities throughout southern Ontario and has thereby demonstrated the value of forest management to people living in that region. Some of these forests have been in existence long enough to provide, today, an income to the bodies that own them as well as a supply to local industry.

More recently, increased attention has been paid to developing stands not owned by any public body. The Federal-Provincial Agricultural Rehabilitation and Development Agreement has recently provided for federal participation and cost-sharing in projects such as the farm forest programme, the development of woodlot owner associations and the encouragement of private reforestation and stand improvement projects. Agreements of this sort were expected to spur the rehabilitation of the privately-owned forest resource.⁶⁶ An even more significant step was taken in April, 1966, when the Legislature approved an Act “to provide for the Extension and Im-

provement of Privately-Owned Woodlands". This measure authorized the Minister of Lands and Forests to enter into agreements with the owners of suitable lands for "the planting of nursery stock or the improvement of the woodlands." Through such agreements it is hoped that private lands will receive the same benefits that have accrued to the county and municipal forests and thus be restored eventually to their rightful place in the economy of southern Ontario.⁶⁷

This is the current picture of Ontario's forest situation. In a few aspects the tale is a bleak one, but it is impossible to correct overnight a situation that men and nature have been conspiring to create for over a century. In enduring these difficulties we should not forget the great deal that has been done and is being done to prevent their recurrence. After all, a good case could be made for arguing that Ontario is the first major forest region in the world to tackle the problems of forest management before such a policy was forced on her by serious forest shortages destroying a major industry. On the other hand, the achievements of the present and the immediate past should not be allowed to obscure the very real difficulties that still exist and will continue to exist. The difficulties are not insurmountable. If the best of our human resources can be combined with the technical skills that are available, as they have been in the past, then the future of our natural resources can be very bright indeed. But this is a perpetual challenge both to the Department that manages these resources and to the people of the Province, who own them. If the challenge is ever forgotten or neglected on either side, the consequences will be tragic and enduring.

MODERN PLANNING AND MANAGEMENT OF PUBLIC LAND



The past twenty-five years have witnessed the dawn of a new era in Ontario land policy. This dates in part from the Report of the Select Committee on the Administration of the Department of Lands and Forests, 1939-41, and in part from the major reforms in the administrative structure that followed it. The basic concept of the new era was that land should be considered and treated, not merely as a means of settlement, but as a natural resource capable of many uses, each of which required thorough exploration and the working out of a suitable technique for its management.¹

The first step was to 'rationalize' and decentralize the existing administrative machinery. Beginning in September, 1941, land administration in each district was merged with the timber and forest

protection services of that district, under the direction of the district forester. Thus the field officers, who formerly carried out their work under the direct responsibility of head office, now found themselves held responsible for implementing policy in their field, as it applied in their own districts. For the time being, during the Second World War, there was not enough trained staff available to put into full effect this transfer of duties. Accordingly, to bridge the gap and facilitate the introduction of the new land policy, the men in the field were given instruction by a manual (*Manual of Public Land Administration*) supplemented by special classes dealing with the routine and principles to be followed by the various Divisions at head office.

Meanwhile, at head office itself, all matters concerned with land were brought together into a single Branch. This involved combining the former Lands Section with the management of Parks, which had hitherto reported direct to the Deputy Minister. The combination lasted until 1958, when the Lands and the Surveys and Engineering Branches were united, while the section dealing with Parks became a separate administrative branch.

The Select Committee of 1939-41, in both its majority and minority reports, had criticized the Department for its policy in disposing of lands for summer resort purposes. This criticism, and the changes involved in overhauling the structure of the Department, led to a decision to review the entire lands policy.² As a preliminary to this, and to give time for a thorough and unprejudiced study of the whole question, all sales of Crown lands, including provision of free grant locations, were suspended as of June 25th, 1941. This marked a radical departure from the older land policies of the Department. Now, to all intents and purposes, the free grants system came to an end, with the announcement that free grant locations would be closed and that no more such grants would be made, except to military personnel. At the same time a uniform price was set for the purchase of all agricultural land, of fifty cents per acre, payable only in advance. The main motive for this action was apparently to shut the door against the indiscriminate taking up of land.

As a result of these new policies, the Veterans' Land Grants remained the last vestige of the free grant era. The Government felt that it must continue to reward military service by making grants

of free land to all ex-servicemen who might want it. New regulations were issued on January 6th, 1944, providing for free grants of land for agricultural use to all those who served in the active service forces outside of Canada in the two World Wars. In 1954 veterans of service in Korea were added to the eligible list. Another regulation provided protection for those enlisting in the armed forces who had already located on land and were in the process of fulfilling settlement duties.³ In 1946 an agreement was entered into with the Dominion Government which would allow veterans to receive financial assistance under the terms of the Dominion Veterans' Land Act of 1942. This agreement covered only lands in Ontario which were being sold. Under it the Province became responsible for the allocation of land to veterans, as well as for the other functions ordinarily performed under the Public Lands Act.⁴ The Annual Report of the Department for 1956 stated that in the first ten years of the operation of the Ontario-Dominion Agreement some two hundred veterans were established on agricultural land, of whom only six had failed to make good. This was considered a success so far as it went. But in the overall picture, a total of two hundred persons placed on the vast expanse of Ontario soil hardly represented a great success. In fact the policy of making free grants to veterans was ended in 1961, when the provisions of the Public Lands Acts authorising them were revoked. Since then no new developments in this field have taken place.

The decentralization of the Department's administration has greatly influenced its land policies since 1941. These policies were formulated to attack the problem of agricultural settlement in certain areas of the Province by using the district offices, where information would be more accessible and the interval between initiation and implementation shortened. By Order in Council dated June 30th, 1942, all land was to be inspected before settlement was allowed.⁵ In addition, land acquired for agricultural purposes was to be at least fifty per cent fit for cultivation, and located within one mile of a road and within three miles of a school. The new regulations also provided for the sale or lease of lands for special purposes. Issue of "land-use permits" for temporary land-use was made an added responsibility of the district foresters. To obtain further control over land settlement, it was recommended that discussions should be held with all applicants for agricultural lands, to make sure that the land

chosen by them was suitable and to determine whether each applicant was serious in his intended purposes. This policy was stressed in order to discourage applicants who were financially unable or insufficiently experienced to meet the requirements of the land regulations.

Other features of the policy show that the Department was steadily changing its thinking about land-use and settlement. Land unsuited for cultivation, but suitable for pasturage or fuel purposes, could now be sold to certain specified settlers. By 1950 there developed a strong push in the Department to clean up the free land grant dispositions by simplifying the patent procedure. An amendment to the Public Lands Act provided for the approval, by the Lieutenant-Governor in Council, of certain other forms of land disposal, if they were considered in the public interest.⁶ Each change reflected a growing concern in the Department about the land and how best to use it, whether for agricultural, recreational or other purposes.

But agricultural land was not the only sphere where land policy assumed a new shape. At the time when the departmental structure was being overhauled, the requirements for purchasing summer resort locations were also revised, to meet the criticisms voiced in the majority and minority reports of the Select Committee. The majority report, for example, had complained that the method of leasing summer resort locations did not conduce to creating a desire, on the part of the lessee, to commit himself to any large expenditure of money on the property. It therefore advocated that summer resort lands be henceforth sold outright, rather than leased, with the object of providing additional incentive to the purchasers to commit themselves.⁷ On its part, the minority report stressed the need for accurate surveys, so that purchasers could obtain a clear title to the land and avoid later complications, by knowing from the beginning exactly what price they would have to pay for it.

Besides these criticisms there were other important factors at work which influenced the Department's thought. There were changes in habits of living which tied in with the Department's decentralization of its land administration. Among these habits were the increasing use of the automobile and an increasing trend towards urban living. Both of these produced a desire to escape from the large city, especially at weekends in the summer, to a cottage or

summer resort. The Second World War retarded, for a time, this expression of the public's desire for summer resorts, but substituted for it, in those cases where ownership of a cottage could not be effected, a keen demand for recreational facilities of a local nature, usually in the form of a public park.

To meet this challenge, a new Lands and Recreational Division of the Department was set up, as part of the 1941 reorganization. Criticisms that had been made of summer resort land policy were met by providing a clearer definition of the conditions necessary for purchase and by arranging to issue patents as soon as these conditions were fulfilled. Later regulations stipulated that at least five hundred dollars must be spent on constructing a building on each lot. At the same time the required minimum depth of such lots was lowered from six hundred to three hundred feet, on the ground that the former figure was unnecessarily high. In 1953 fresh regulations were issued which laid even greater stress on the use of land for summer resorts. Henceforth all Crown lands, with but few exceptions, were to be sold only for either summer resort or agricultural purposes.⁸ At the same time the Department has made it easier to carry out and administer summer resort land sales.

This has been done by expanding the policy of laying out preliminary subdivisions of summer resort lands, to assist the public in its choice. By 1959 the Department had begun to sell summer resort lands by public tender wherever the demand exceeded the supply. Also, it had inaugurated a system of disposing of recreational lands for private individual use by lots on registered plans.⁹ More recently still, Departmental policy has begun to provide for the sale of cottage summer sites by public auction, where the demand is heavy. In 1962 a further stage in the decentralization of land policy was reached with its transfer to the district offices, with the exception of the issuance of patents and decisions on matters of general policy.¹⁰

From all this it is clear that the land policy of the Department has been changing much more and faster than it had done during several previous decades. The number and content of its new policies showed that the Department was shifting its thinking towards a more active participation in, and control of, land disposition. Land is still the starting point of that thinking; but more care is now given to how and by whom the land is to be used. An indication of the new trend is the setting up of two inter-departmental com-

mittees, designed to bring together all those persons in the Departments who are interested in land policy. The two committees are the Public Agricultural Lands Committee and the Private Lands Liaison Committee (whose functions will be discussed later).

The Public Agricultural Lands Committee was established under the authority of Section 43b of the Public Lands Act passed in the legislative session of 1960-61.¹¹ The members of this committee are appointed by the Minister of Lands and Forests. Its duties consist of recommending to the Minister of Lands and Forests those areas which are deemed suitable for agricultural use; considering applications for such lands; and making recommendations to the Minister regarding the disposition of these applications, in terms of agreement for sale and patent and agreement for rental.

This Committee works at two levels.¹² One of these is the district sub-committee, which includes the agricultural representative, the lands supervisor and the district forester. It arranges to interview all applicants for agricultural land and makes use of the land-use report relating to that particular area. These district sub-committees have the power to turn down an application. But if the basic requirements are met, then the necessary documents, together with the recommendations of the district sub-committee, go forward to the administrative committee. This consists of the supervisor of the Lands Section at the head office of the Department of Lands and Forests, who acts as chairman; the associate director of the ARDA branch of the Department of Agriculture; the district agricultural representative of the Department of Agriculture; and the district forester and district land supervisor from the Department of Lands and Forests. The administrative committee, after considering the sub-committee's recommendations, in turn makes its own recommendations to the Minister of Lands and Forests. They are based on such questions as the suitability of the land, the ability of the applicant and the economic feasibility of the proposal. On the basis of the recommendations, the Minister may then designate certain areas as suitable for agriculture and may enter into an agreement to sell or rent the land. This Committee is still functioning, although it has become more an administrative than a purely planning unit. The main advantage of its continuation seems to be that it allows a flexible approach to meeting the various land problems. At the present time much of the work of the Lands Section is concerned

with problems relating to agricultural townships, water lots, summer resorts and special uses of land for commercial purposes, etc. – also, with the ever-present problem of squatters. While each of these is a big problem in itself, all are now treated as being parts of a larger whole. This is made possible by adopting a land-use approach in taking decisions on the future land policy of the Department.

Over the years there have been intermittent calls for the proper management of land with a view to producing the best possible results. Most of these calls have been lost in waves of recurrent optimism about the unlimited possibilities of all land. Whoever got to a parcel of land first determined its use and continued to do so as long as he held onto the property. At the time when northern Ontario was being settled, co-ordination of the various proposals for the use of land was lacking. Each proposal was worked out within its own sphere, with no one caring about its overall effects. Thus, the effects of pedology (the science of soil) have taken effect only during the last two decades. Through the application of this science the composition and utility of the soil are now determined in a more scientific way than was previously possible; in effect this has eliminated some commonly-held erroneous ideas, for example that the best timber land is always the best agricultural land.

Land is the one constant factor that enters into the use of all natural resources; for all projected variables are based on some specific use of land, be it for agricultural, forest, recreational or fish and wildlife uses. For this reason, the use of land must be planned. Certain areas of land have various capabilities, i.e. some are better for agriculture, while others may be suited only for a fish and wildlife preserve. The late Dr. B. E. Fernow found himself in a minority when he suggested that there ought to be some planning before any more land was opened for settlement. He observed that “most of the land will be capable of being turned into farms, but you must be careful as to where you settle.”¹³ Later developments indicate that few people at that time heeded this advice about the land in the Clay Belt of northern Ontario.

In 1946, however, we find evidence that the ‘Department’s thoughts were turning toward this idea of planning. The Annual Report of that year states that “some study has been given to the best method of development of lands for recreational, agricultural and other purposes.”¹⁴ No doubt this trend of thinking was caused

by the increased emphasis on conservation which sprang up during the Second World War, and took shape with the publication of the Ganaraska Report in 1944. The Department of Lands and Forests participated in this report and in the later report to the Ontario Legislature of the Select Committee on Conservation, which came out in 1950.¹⁵

While both of these Reports stressed the idea of conservation, it was apparent that they also directly involved land-use planning. For example, the Inter-Departmental Committee on Conservation and Rehabilitation set up by the Ontario Government to study the Ganaraska Watershed stressed conservation, but added that this really involved a survey of all natural resources and not just of soil restoration or reforestation. The land-use survey served as a basic physical inventory on which to plan future uses for all the various natural resources.

The Select Committee on Conservation stressed the same ideas. Besides surveying natural resources, this Committee also emphasized the necessity of evaluating the results of previous Ontario practices in the light of the more recent findings of science. In particular, the Committee criticized the past practice of indiscriminately allowing settlement anywhere in northern Ontario without proper regard for the state of the natural resources. In its report it made two recommendations:

- (1) No new townships or areas in northern Ontario should be opened for agricultural settlement until a basic land-use survey has been made with favourable findings.
- (2) Such a survey should be made by a Provincial Inter-Departmental Committee, in consultation with a Regional Advisory Board from each region of settlement.¹⁶

As part of the emphasis on land-use, the Committee advocated that the Government should establish a policy of acquiring land for public recreational purposes in southern Ontario.¹⁷ This advice the Department followed by setting aside areas of Crown land on lakes and rivers for specific uses. Amendments to the Public Lands Act in 1958 gave the Minister power to zone public lands for recreational purposes. More recently, the Public Lands Act has been amended to require that at least twenty-five per cent of the total frontage of all areas bordering on water should be reserved for public use.¹⁸

The Royal Commission on Forestry (1947) also strongly supported the idea of land-use in conjunction with the planning of natural resources. It advised the Department to lay down a definite policy before opening up any new areas for settlement. If agriculture was to be the main purpose, only then should the specialists be sent in to survey the area and prepare plans for its use. The Report also advocated a province-wide classification of all lands, based on certain premises.¹⁹ Moreover, Major-General Kennedy also put forward the suggestion that the possibilities of fish and wildlife or tourist operations should be taken into account, particularly on any sites which might be rated as "marginal" in the above-mentioned classification of lands. The Report concluded that it was "only by properly weighing all these factors that sensible land-use may be decided upon."²⁰

In these enquiries the role played by the Department was that of either partner or subject. It is difficult to say whether the reports of these committees influenced land-usage or were themselves influenced by Departmental thinking on land-usage. It must be remembered that throughout this period the Conservation Authorities were in full operation in southern Ontario.²¹

Land use in southern Ontario was a very different proposition from that in the north, where much of the land still remained in the possession of the Crown. Whereas in the south the Department could only advise, and in some cases control, the usage of land, in the north with its special characteristics of climate, topography, etc., many areas were ripe for full-scale Governmental control and planning. This was especially true of land which was to be set aside for recreational purposes.*

At this point we need more precise definitions of the terms "land-use planning" and "multiple resource planning."²² To begin with, land-use planning is the first stage of the development of a multiple resource management plan. For the purpose of the Department land-use planning can be defined as the making of the best possible use of land, air and water and the products of land, air and water for the benefit of man within the framework of existing social and economic conditions.

In his studies on land A. Hill states that multiple land-use is

*See Chapter 22 on "The Expansion of Parks and Recreation".

applicable when the potential land-use of any area allows for two or more uses which may or may not become differentiated through further study. For example, a certain area of land may be designated as suitable for either agricultural land in its entirety or for multiple land-use (forestry and agriculture) or forest land-use. The objective must be to produce the crop for which the land is best suited, consistently with the social and economic welfare of the people.²³ "Best suited" in this sense would take into consideration many factors. First, present use and future requirements must be noted. Second, present and future population changes, economic and strategic locations, changes in social customs, etc. all have their influence on the final decision. In the case of agriculture, the important factors would be those determining the kinds of crop to be grown and the procedures to be followed that would assist the seeding, planting and harvesting of the crops.

For land-use purposes all sites can be classified on an ecological basis. Land at a given site is divided into a series of classes which reflect its natural characteristics and its potentiality for specific uses. This land classification may then be arbitrarily subdivided into several sub-classes ranging, say, from Class I, the most productive agricultural land, to Class VI, the poorest. The same classification would apply to all natural resources, whether agriculture, forestry, fish and wildlife or recreational. But in each case the system would work out differently, inasmuch as each resource possesses its own special type of land characteristic.

By means of this classification, the land area of a district may be sorted out into various categories. For example, the land-use map of any district will show a number of zoned land areas denoting potential agricultural land, potential timber production land, potential wildlife habitat, potential areas for fish production and potential recreational areas.

Planning, as such, has been part and parcel of government administration for a long time. However, specific planning for the future – even the idea of marking out guide lines for the future – has been avoided because of its supposed political implications. This meant, in the case of the Department, letting the management of each particular resource rest on a basis of either planning for the immediate future only or of continuing the policies of the past. There was no overall planning for the integrated management of all

resources over a long future period. However, because of the dynamic changes which are now taking place and which affect land and its use, long-range planning is now becoming a necessity.

Quimby Hess, while a forester in Kapuskasing district, worked on the Forest Management Plan for that district. In his study for this plan, Hess noted the inherent difficulty of deciding between the development of agriculture and the use of land for forest purposes, especially in the case of the Settlement Township Forest Management Units. The difficulty here was to make sure what the next crop was likely to be, because of the irregular settlement activity and policy of the past, which allowed most areas to be opened up for supposedly agricultural purposes, but subsequently allowed the land to be first stripped of its pulp-wood and afterwards abandoned.

It was suggested that, in view of the special circumstances of the Clay Belt, farming was a full-time occupation and therefore only the best land available should be used for this purpose. It followed that there ought to be a system of land classification whereby land suitable for agricultural purposes would be delineated as such, while land not immediately suitable for agriculture would be left for forestry purposes, but with a future potential use as agricultural land.

These suggestions were not immediately taken up, but the introduction of land-use planning was encouraged by other developments in three directions. The first of these was the forest protection plan. Then came the orderly management of timber resources through the great impetus given by the Forest Resources Inventory, which was commenced in 1946.²⁴ Third, land zoning committees were being established to provide planning for recreational land purposes. These committees were originally established by Order in Council in 1956 in sixteen of the Department's districts, excluding only those in southern Ontario, where some conservation authorities were developing their own recreational facilities.²⁵ In 1957 a further Order in Council was passed extending the recreational planning committees to all districts located in southern Ontario. These recreational planning committees can be considered as forerunners of the present advisory committees on recreational land use planning.

The district forester served as chairman of the committee in his district, together with the local member of Parliament, a representative of the Northern Ontario Tourist Outfitters Association (where

applicable), a representative of the Federation of Anglers and Hunters and a representative of the forest industries. Meetings of the committee were held at least once a year to receive briefs or oral submissions. Recommendations made by the various district committees were coordinated by the regional forester who, in turn, forwarded them for consideration by the Department. All of the northern part of the Province was then completely zoned for an orderly development of recreational land to meet the growing needs dictated by population increases.

Under the recreational zoning plans, the Province was divided into three zones: a closed zone, in which all land was reserved for public use; a deferred zone, where the development of Crown land for recreational purposes was to be postponed for a few years because of special adverse conditions; and an open zone which was suitable for development, except under special circumstances. There were further refinements of this division into zones; but these three were considered as the most important elements in planning recreational land zoning.

With the increasing emphasis being placed on land use, an Order in Council was passed on January 18th, 1962, reconstituting the previous committees for all districts north of and including the Parry Sound* and Pembroke districts as district advisory committees on recreational land use planning.²⁶ Thus, the recreational zones were to be fitted into the over-all master land-use plan. The terms of reference for these advisory committees on land-use planning include the following:

- (1) The committee's prime purpose is to evolve a recreational zoning plan which will form part of an over-all land-use plan for all natural resources in the district.
- (2) The committee will periodically review the use of the zones, and recommend any changes considered necessary.
- (3) The committee will consider any use of the land which may affect the recreational land-use and make recommendations accordingly.²⁷

Once the committees have decided on their recommendations,

*Parry Sound district now has *two* advisory committees, corresponding in essence to the electoral boundaries within the forest district. The existence of two committees has made it possible to include representation of other bodies, such as the cottagers' associations, chambers of commerce, association of municipal councillors, etc.

they are then forwarded to head office, where those which are considered desirable are forwarded to the Minister of Lands and Forests for his approval. Recommendations for land zoning, once accepted by the Minister, have the status of law since, as mentioned previously, an amendment to the Public Lands Act in 1958 gives the Minister power to zone land for recreational purposes. Eventually it was decided that these recreational zoning plans should become part of the over-all land-use plans.

While in theory it may seem relatively easy to divide Ontario up into different recreational areas, in practice it remains difficult to do so. First of all it has to be decided what kind of recreational facilities should be made available in a certain area. Should conservation or utilization be the dominating theme? Equally important is the problem of private lands. For the purposes of the Department, recreational land-use planning under the Public Lands Act applies only to Crown Lands. Another problem is that of deciding *when* to open up areas, i.e. before or after new access roads have been built.

While there has been a strong and steady growth of recreational land-use planning over the last decade, the other ingredients in the whole structure of multiple resource planning cannot be overlooked. Reference has been made above to the attempt to establish a pattern of land-use planning in the Kapuskasing district. This experiment, fostered by the impetus of other forestry and recreational plans, gave rise to what may be called the first attempt at a multiple resource plan for any Ontario district; it sprang from the recommendations of the Glackmeyer Subcommittee of the Northern Region Land-Use Planning Committee – generally known as the Glackmeyer Report. This Report was intended to be a pilot study of a farm-forestry area that would illustrate some, but not necessarily all, of the problems and principles involved. The objective of the Northern Region Land-Use Planning Committee was stated in the following terms: "To conduct land-use research on a demonstration area, in order to obtain data which will illustrate the principles of good farm, forest and wildlife management in the Cochrane Clay Belt and thus provide a basis for the formulation of land-use policies."²⁸ The general aim of the Report was to develop an integrated plan which would cover all the renewable natural resources in the Clay Belt area.

Since the basic purpose of the Glackmeyer Subcommittee was to determine which areas of the Clay Belt would be suitable for agri-

cultural development in the next few decades, it was necessary to select an area where the agricultural land-use plan would be the basic consideration. Hence the selection of the Glackmeyer area. But this agricultural land-use plan was to serve only as a starting point for a multiple land-use plan. The latter was important because it presented a plan of unified action and offered distinct alternatives in specific circumstances. Above all, the Glackmeyer Report was a plan for the best possible use of the land, and not just another colonization plan.

Membership of the Northern Region Land-Use Planning Committee and the Glackmeyer Subcommittee consisted of Government officials working in that area, who had a keen interest in its renewable resources. From the start they laid stress on producing a plan of action and listing the benefits which would be derived from it.

One of the main recommendations of the Glackmeyer Report is that agricultural development be confined to areas of established primary agricultural development.²⁹ The Committee advocated this to avoid spending money on developing land for agricultural purposes before it is needed. In addition, it frees for forestry purposes land not immediately needed for agricultural purposes; therefore the estimated yield is a very important factor in any plan for a forest-farm area. Aid to farmers should only be made available to those who live within this primary agricultural area. Most important of all, the sale of Crown Lands must be restricted to this specific area. Other agricultural recommendations included plans for further agricultural development beyond the primary area and an insistence that any settler must have the minimum acreage required for success in his type of farming.

On the forestry side, the Report calls for an increased forest management program for lands not immediately developed for agriculture.³⁰ Following this up it also advocates the establishment and management of protective forests. The Report also recommended that certain land in the area should be reserved for recreational and wildlife purposes, to meet future needs; and that the potential of all such lands should be fully investigated in order to make sure that the requirements are met.

The intention of the Glackmeyer Report was to produce a practical solution within a scientific framework. But above all, it provided a pilot plan for other areas of a similar character. "In addition to serving as a reference area for all agricultural settlement areas,

the pilot area is also representative of areas in which a primary type of forestry may be introduced, particularly on lands with a good forest potential but which require effort in establishment."³¹

The work of the Glackmeyer Subcommittee was completed in 1958, but the Report was not published until 1960. In the meantime, however, Departmental thinking on the matter of land-use planning had moved ahead to a point where a Land-Use Planning Section was established at head office, in the then Surveys Division.³²

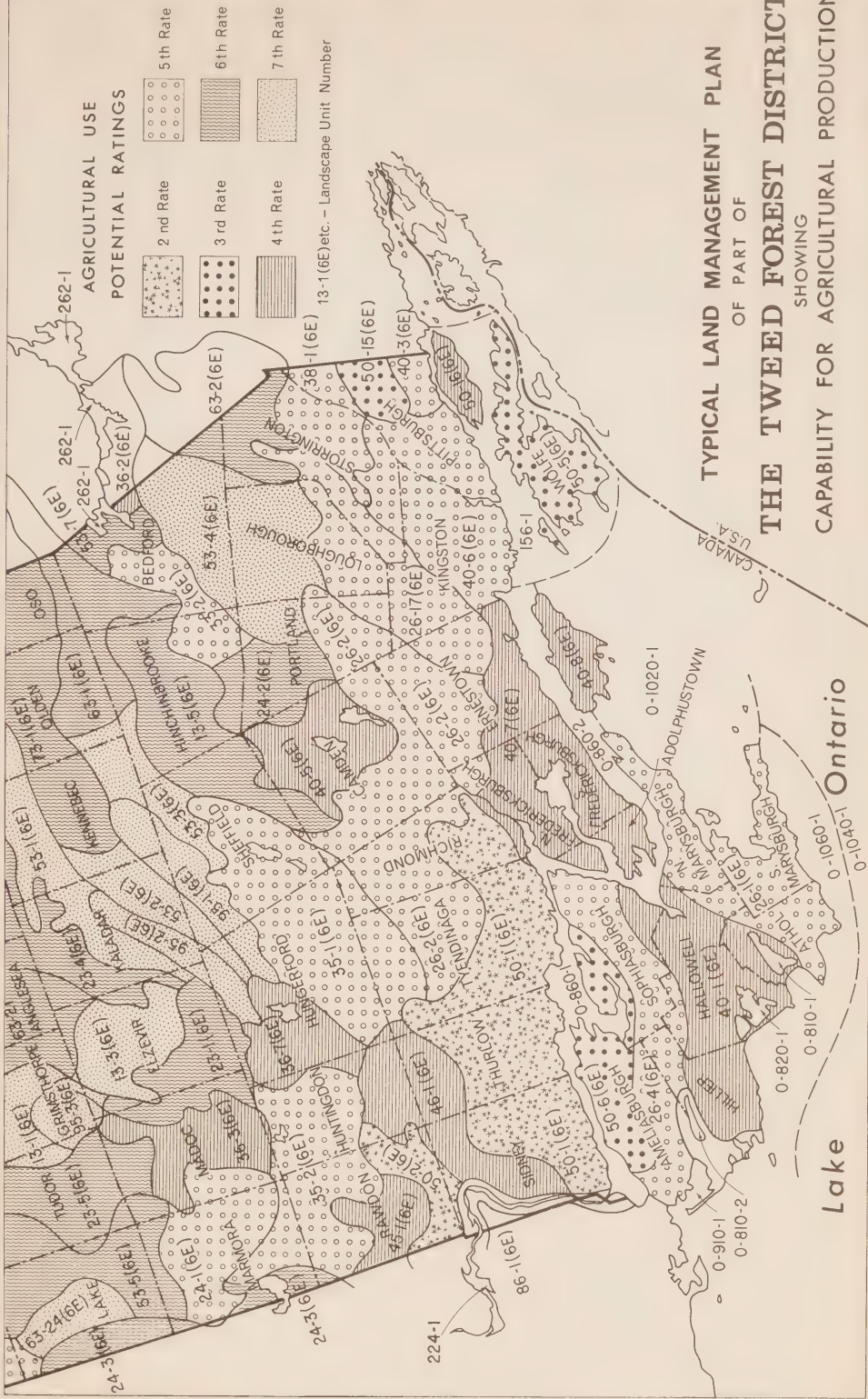
Among the duties to be undertaken by this new Section were to work out the status of land-use planning in the Department in terms of legislation, regulation and policy statements; to establish a plan of action for land-use by the Department; to prepare a land-use manual; and to recommend and draft any legislation that might prove necessary. In the administrative line of command, the head of the Land-Use Planning Section was to report directly to the Surveyor-General.

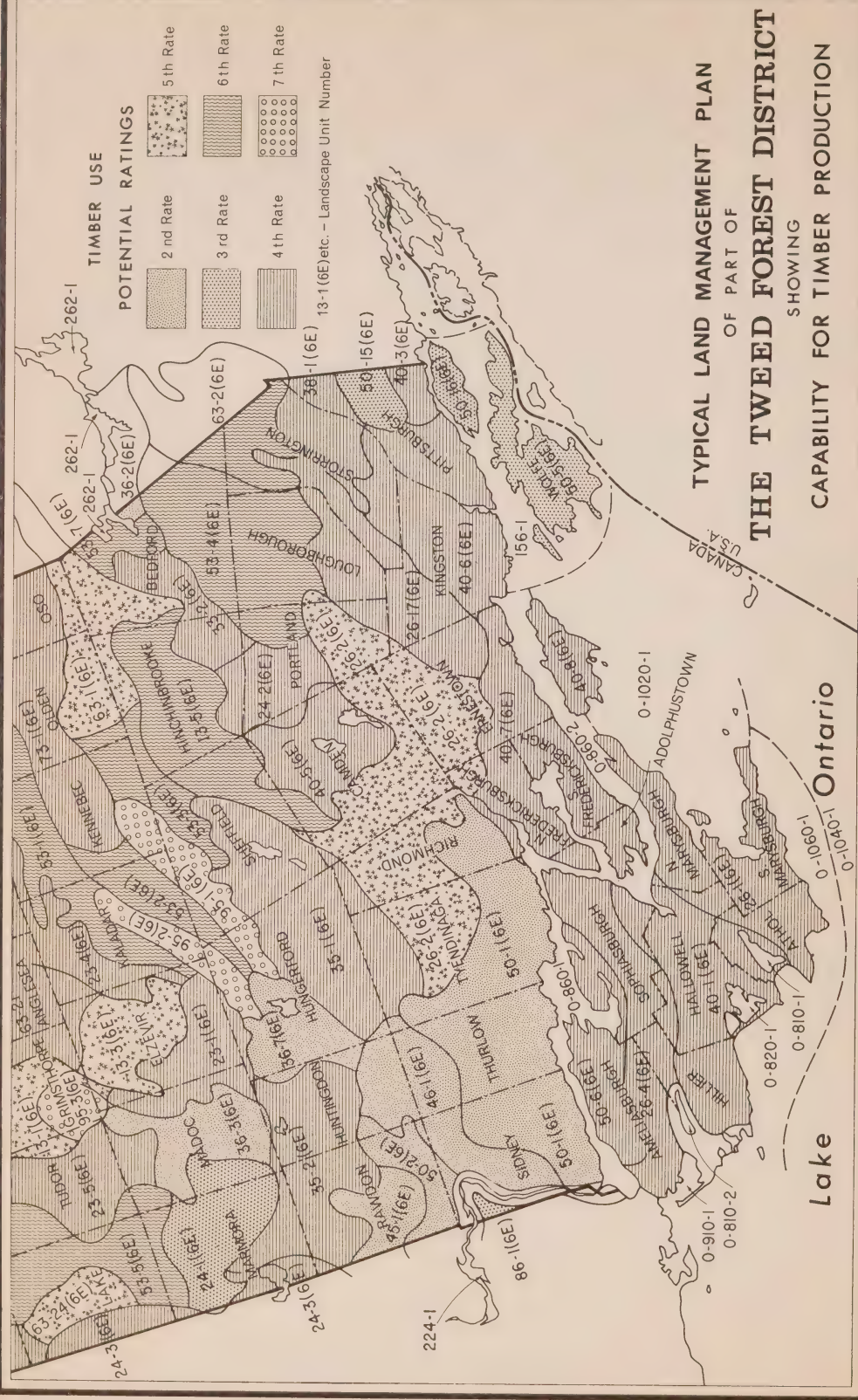
Since each district would have its own land-use problems, it was felt that the districts generally ought to have an important say in the administration of any land-use plan. Therefore the administration was left to the districts (through the district forester) plus the various branches of the Department which were involved. This meant that the head of the Land-Use Planning Section was placed in a position to supervise and co-ordinate the many land-use plans.

The purpose of the Land-Use Planning Section was to guide the field offices and head office in a concerted effort to produce the best over-all management plans, which would not only provide for the best possible management of each individual resource, but would also take into consideration the need for co-operation and integration of the management plans for all uses.³³

To achieve this, a land-use planning guide was prepared, to supply a framework of basic requirements that must be met before putting into operation any land-use plan.³⁴ This planning guide was evolved in consultation with all the district foresters and their supervisors, through visits to each district to ascertain their opinions. It was couched in general terms to allow district foresters plenty of latitude in preparing plans. However, they were requested to stay within the general terms of reference, in order to ensure some uniformity. The contents of each district land-use plan (as set out by the guide) were to be as follows: Section 1 – district history;

Lake





TYPICAL LAND MANAGEMENT PLAN
 OF PART OF
THE TWEED FOREST DISTRICT
 SHOWING
 CAPABILITY FOR TIMBER PRODUCTION

Lake Ontario

Ontario

Section 2 – Departmental responsibility (as outlined by the district forester in conjunction with the Deputy Minister); Section 3 – information available; Section 4 – land-use capability ratings (based on studies made by the soil-site branch of the Research Division of the Department); Section 5 – area division; Section 6 – existing plans; Section 7 – integration of plans; Section 8 – review of plans and preparation of the multiple land-use map; Section 9 – bibliography.

On the basis of this guide, each district was called upon to submit a land-use plan. It was made clear, however, that these plans would be subject to constant revision in the light of new information and thinking that might emerge. Up to date all but two of the districts have submitted their land-use plans. Of these twenty plans, four (Tweed, White River, Geraldton and Lindsay) have been approved by the Minister for legal action under the provisions of the Public Lands Act. The others are being examined in preparation for approval. Each plan has received the approval of the chiefs of the Timber, Parks, Fish and Wildlife, and Survey Branches, the Deputy Minister and the Minister.

The first land-use plan submitted came from the Tweed district.³⁵ This area was chosen as the first to be surveyed because of its interest in the land-use concept, and because members of the Department desired to show that land-use planning could be applied to a part of southern Ontario and therefore was applicable to *all* of Ontario. Tweed district's Land-Use Plan was also the first to use the site classification of land evolved by the Research Branch of the Department. Thus the Tweed plan was a prototype designed to show the suitability and practicality of this new site classification as a scientific basis for land use planning.

At this point we may digress to see just how the Tweed Land-Use Plan does employ the concepts of land-use planning in its attempt to solve the conflicting demands upon the lands of the district. According to the Plan, the main problem in the district is the number of abandoned non-productive farm lands. Other problems include the need for rehabilitation of the forests lying within the District and the need for more recreation space in view of its location within easy reach of major southern Ontario population centres. Furthermore, the Plan notes that while land-use plans apply in theory to all land, in practice they come under full government

control only with respect to Crown lands. Because of past settlement patterns, the Tweed area has a concentration of population along the lakeshore, which increases the difficulty of overall integration.

The Plan itself emphasizes the problem of meeting specific objectives which may be different in each area. Consequently, discriminatory judgments have to be made about land-use capability. First, a criterion has been established for what constitutes agricultural land. Next, the Plan stresses that recreation must be the dominant consideration in assessing the "landscape" qualities of the land and its recreational potentialities in view of the pressure of the surrounding population. Enough land must be reserved for these purposes to satisfy the demands of the people.

To provide a coherent future natural resources policy for the district, the Tweed Plan recommends that existing Crown land holdings be consolidated with those lands in private ownership which can not support agriculture unless a major change takes place in the agricultural outlook and economics policy of the area. Secondly, a favourable atmosphere must be established in order to allow multiple land-use management to be applied to lands continuing in private ownership.

Another major recommendation is that more recreational opportunities be provided along the Lake Ontario shoreline. To do this, Government should buy up substantial frontages along the lake, and spend more money, not only on this, but also on providing for the building of access roads into areas of timber and recreation potential on the Pre-Cambrian Shield. Lastly, the Plan contains a proposal that more wilderness areas should be established.

All of the above recommendations deal with long-range policy. The Tweed Land-Use Plan also sets out some short-range plans which could provide stepping stones to the long-term goals. Most of these short-range plans are specific resource management plans for timber, wildlife, etc. For example, research must be carried out to assess site productivity on the main site categories in the district in order to permit of more precise timber use recommendations. In all of these recommendations it is implicit that the Plan must be used only as a guide, allowing for fresh recommendations whenever new facts and circumstances warrant it.

But the co-ordination and guidance of land-use plans were not the only tasks of the Land-Use Planning Section. The supervisor of the

Section has also served as chairman of the Private Lands Liaison Committee. This committee was established by Order in Council on March 26th, 1959, and consisted of three members of the Department of Lands and Forests and three from the Department of Agriculture. Its terms of reference allowed it to enquire into all aspects of administrative procedure and planning which affected both the Departments in respect to land and agriculture. The members of the committee made recommendations to their respective Ministers. In view of the emphasis on natural resource planning, the additional knowledge and co-operation to be gained from another Department interested in land development proved to be of great value.

One of the problems faced by the Private Lands Liaison Committee was the sale of land for agricultural purposes. As a result of their deliberations on this matter, an amendment was passed to the Public Lands Act which made it possible to sell a parcel of land in northern Ontario that would be tailored to the requirements of the potential farmer. Because of the consistency of agricultural land problems, there gradually evolved the formation of a Public Agricultural Lands Committee³⁶ which, it was felt, would be better able to concentrate on that specific matter.

The Private Lands Liaison Committee also arranged for co-operation between the two Departments and the Ontario Agricultural College (now the University of Guelph) with respect to the testing and classification of soils and the specification of the land-use of all lands in southern Ontario.

In co-operation with the Lands Section, the Land-Use Planning Section issued a series of revised instructions for the Recreational Land-Use Planning Committees. These instructions represented an attempt to consolidate the number of zones and provide a uniform method of operation. The responsibility for head office guidance at the district meetings and the preparation of the recreational plans for the Minister's signature were added to the duties of the Land-Use Planning Section.

At the beginning of 1966 the Land-Use Planning Section was merged with the Land Acquisition Section. The latter section had been created in 1963 to process recommendations and applications coming from the various departmental administrative districts, for the purpose of providing public access to water and lands for hunting, fishing, forestry and recreation; in other words, park develop-

ment, general recreation wilderness areas, access points, forest management and district improvement. The merger therefore represents another step in the practical application of land-use plans since, as already pointed out, some private land must be brought for recreational purposes, even though unproductive agricultural land, if purchased, might be more profitably used.

This movement towards co-operation of all agencies interested in the future of land reaches far beyond purely inter-departmental liaison in Ontario. It extends now to the realm of inter-governmental co-operation, whereby the interested Ontario Government departments and the federal Government agency combine forces to develop policies for a more economic use of unproductive farm lands. Liaison between the federal agency and the provincial departments is effected, in the case of Ontario, through the latter's Department of Agriculture. For its part, the Department of Lands and Forests is deeply involved in this sphere, because of its responsibility for land management.

This scheme of inter-governmental co-operation is popularly known as ARDA (the Agricultural Rehabilitation and Development Act). The main purpose of the agency set up by the federal Government to administer the Act was to encourage the making of surveys of rural areas in order to enable local groups, including municipalities, to enter into agreements with their respective provinces and with the federal Government for the rehabilitation and development of these rural lands.³⁷ ARDA authorizes agreements for three types of projects: (1) projects for alternative uses of land, (2) rural development projects, and (3) soil conservation projects.³⁸ All three of these have implications for the Department and for land-use planning.

One of the advantages of the ARDA scheme is that no new organization has to be established, but use is made of branches and groups already in existence. In this way, the Lands Section and the Land-Use Planning Acquisition Section of the Department of Lands and Forests keep in close touch on matters of policy and administration with the Department of Agriculture, which in turn serves as the connecting link with the federal ARDA authorities.

Some of the other sections of the Department are themselves involved with ARDA. For example, the forestry economics unit is doing land productivity research, which involves comparing the re-

turns from forestry with those from other land-uses. The forestry section of the Research Branch is currently working on the Eastern Ontario study project. This is a study of landscape units of the eleven counties of Eastern Ontario, including the whole of the Kemptville Departmental district and parts of the Tweed and Pembroke districts. It must be emphasized, that this study is a pilot project, so that no definite conclusions are yet available.

In the foregoing pages we have shown the trends of the Department in its administration of one natural resource, land. Departmental thinking in this area has developed step by step from an attitude favouring immediate agricultural settlement to one dominated by planning for the future. Moreover, the Department no longer works in isolation. This applies not only to inter-departmental cooperation but also to new liaisons with other governmental departments, both federal and provincial.

But this co-operation has also developed through the use of more scientific means of determining the best use of land. No longer is one idea dominant. All factors are taken into consideration and only then is a policy developed. For a long time agricultural settlement dominated the thinking of those opening up new areas. In some cases this was shown to be the wrong policy. Too great an emphasis on any one use of land may be detrimental to a scheme intended to make the best possible use of all the assets of a region. The fact that an area is now unproductive farm land does not necessarily imply that it ought to revert automatically to forestry. The land may be more useful as a recreational area or as a wildlife sanctuary. Determination of the "best possible use" can only be achieved through a meeting of all minds and within the framework of an overall plan.

This latter point cannot be over-emphasized. Land is one of our natural resources which must be used wisely within the framework of an all-encompassing natural resources policy. If plans are made now to provide for future needs, some of the costly mistakes of the past can be avoided. This, then, is the goal which modern land management within the Department has set for itself – the determination of the best use of land within the guidelines of a multiple resource management plan.

FISH AND WILDLIFE MANAGEMENT



Fish and wildlife were among the first of Canada's natural resources to be exploited. Her coastal waters were fished before there were any settlements; later, her inland waters, especially the Great Lakes, became the seat of valuable commercial fisheries. In the same way, furs from Ontario were traded even before the Province was explored; indeed, the fur-trading posts of the Hudson's Bay Company on James and Hudson Bays rank with Kingston on Lake Ontario as the oldest settlements in the Province. Today the commercial products of fish and wildlife are more valuable than ever before, though now they form only two of the many resources used by our industrial community. However, they still provide the mainstay of life in many remote settlements.

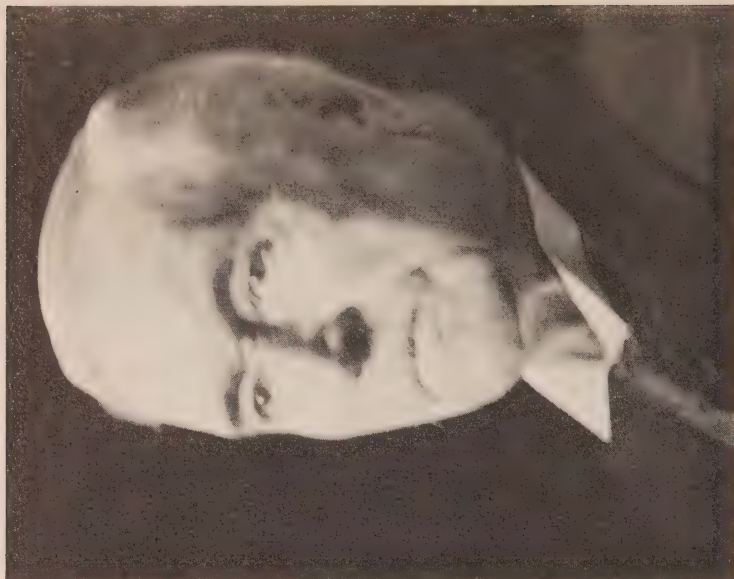
At an early stage Canadians developed a characteristic enthusiasm for, and concern about, wildlife. According to Dr. C. H. D. Clarke "even to the pioneer the spoils of angling and hunting were more important as morale-builders than as food supplements . . . There is ample evidence that the ease with which field sports could be indulged in was a lure to immigrants and compensation for hard work".¹ Thus fish and wildlife became important in relation to recreation and tourism, both of which are factors in our modern economy whose value cannot be expressed solely in terms of dollars. But the early pioneers of Ontario believed implicitly in the apparently inexhaustible abundance of our wildlife resources; and this belief entailed gross wastage and destruction of wildlife leading to the extinction of certain species and the diminution of others, until it became apparent that even in the era of free economy some efforts at regulation by Government were absolutely necessary. Thereafter a small core of educated public opinion, composed of garrison officers and later of sportsmen-naturalists, supported the passage of early conservation laws (such as the Game Acts of 1821 and 1856 and the Fisheries Acts of the same period); but they failed to insist on the provision of effective machinery to enforce them. The wildlife conscience of the age seemed satisfied by the passing of paper legislation.

At the same time people were as yet unable to recognize that the clearing of land, cutting of forests and obstruction of streams affected wildlife and fish even more than did hunting and fishing. This is a conception of the twentieth century, a product of hindsight. Coordination of land-use was achieved on Crown lands when the Game and Fisheries Department was merged with the Department of Lands and Forests. This 1946 amalgamation established for the first time a unified responsibility for the administration and control of all living natural resources on Crown lands and so made it possible to plan their orderly development and effective future management in the interest of the community.

The marriage between the two departments was not easy to bring about, since both had a long and varied past going back to the beginnings of the Province, and impinging on each other only at infrequent intervals. As we have already shown, the Lands and Forests Department had passed through many phases of expansion and contraction, sometimes taking on new responsibilities (such



DR. W. J. K. HARKNESS, Associate Professor of Zoology at University of Toronto, was Chief of the Fish and Wildlife Division (now Branch) of the Department from 1946 to his death in 1960



DR. G. A. MACCALLUM, of Dunnville, Ontario, was Chairman of the Ontario Game & Fish Commission, 1890-1892

as mining) which were later shed, and sometimes contracting its scope (as at Confederation) or enlarging it to cover new industries (such as pulp and paper). The Game and Fisheries Department, on the other hand, had a chameleon-like career, being passed about from one authority to another, in a series of bewildering changes and adaptations to political environment. Always fishing and hunting have been matters of close concern to the politician. All over North America game and fish organizations and the government staffs with which they deal have traditionally been enmeshed in politics.

Without becoming lost in the details of the past, we must establish the main outlines of the history of game and fish regulation in Ontario prior to 1946. The first twenty-five years after Confederation saw little but paper legislation and (in the case of fish) constitutional wrangling over jurisdiction.² The British North America Act had given jurisdiction over fisheries to the federal Government, but had assigned to the Provinces responsibility for "all matters of a local and private nature", which included wildlife. In 1868 the Ontario Legislature re-enacted the Game Law of 1856, to shorten open seasons for game; but again without providing means of effective enforcement. In 1885 Ontario passed a Fisheries Act, placing the control and management of fisheries in inland waters under the Department of Lands and Forests; but little further progress could be made in this field until in 1898 the Privy Council settled the Dominion-Provincial squabble by returning a large share of fisheries jurisdiction to the Provinces. By this time conditions in both game and fish had become so bad as to arouse acute anxiety about the whole future of wildlife resources in the Province.

The impasse was broken through the energy and keenness of Dr. G. A. MacCallum of Dunnville and a group of sportsmen-naturalists who had come to the front after the passing away of the older type of garrison-sportsman. MacCallum had been trained in the only school that could at that time give any biological training, the medical school. He and his fellow-enthusiasts persuaded the Ontario Government to appoint in 1890 a Royal Commission on Game and Fish, under his chairmanship. After two years of investigation he published his Report, a painful and sweeping indictment of the prevailing practices in the treatment of wildlife.

"On all sides, from every quarter," the Commission declared, "has been heard the same sickening tale of merciless, ruthless and re-

morseless slaughter. Where but a few years ago game was plentiful, it is hardly now to be found; and there is great danger that, as in the case of the buffalo, even those animals which have been so numerous as to be looked upon with contempt, will soon become extinct. In many places where game animals formerly abounded, large cities stand today. The clearing up of the land, the cutting down of the forests, the introduction of railways, the ravages of the wolves, the indiscriminate hunting of the human assassin, and the use of dynamite and net, have all contributed to the general decrease of the game and fish of the land. This is . . . indeed a deplorable state of affairs, not only from the sportsman's but from an economic point of view."³

The Commissioners duly recommended a number of specific reforms for the protection of deer and other game; but pointed out that the crux of the problem was enforcement, since "the closed seasons for game and fish are not generally respected throughout the Province, the laws being broken by all classes of the community, principally however by settlers, Indians, boys and pot-hunters".⁴ It recommended therefore the appointment of a permanent Game and Fish Commission and of a provincial force of game and fish wardens, armed with magisterial powers, and paid a salary to enforce the game laws, under the control of the Game and Fish Commission itself.

Public opinion was at last aroused by these revelations, which were confirmed by such tragedies as the disappearance of the Atlantic salmon from Ontario waters, the extinction of the wild turkey in southern Ontario, and the approaching extinction of the passenger pigeon – although the first two were caused, as we shall see, by changes in the environment. At this moment, too, the agitation for Algonquin Park was coming to fruition; indeed the Game and Fish Commission added its own voice to the demand for "a Provincial Game Park, in which protection could be afforded to the game and fur-bearing animals of Ontario".⁵

Following MacCallum's 1892 Report, therefore, both the game and fish laws of the Province were rewritten. New fisheries laws were passed to protect and regulate the commercial fisheries. For game fish angling seasons were established for certain species, and creel limits imposed; and the taking of speckled trout, bass, pickerel and maskinonge was restricted to angling. Penalties for infractions

of the law were increased. Now at last, too, the Province got its first full-time paid game wardens – four in number, paid ten dollars a month – working under a five-man Game Board headed by Dr. MacCallum himself. At first fisheries too came under his authority; but once the Dominion-Provincial jurisdictional dispute had been settled in 1898, a separate Fisheries Branch was set up in the Public Works Department,⁶ under its own Commissioner, F. R. Latchford, a prominent amateur zoologist who later became Chief Justice. Dr. MacCallum and his successors never ceased to urge that Fish and Game should be combined in one Department; but not until 1907 were the two services brought together under a single Superintendent of Game and Fisheries, with a small salaried staff of two inspectors and seven wardens. Eventually, in 1914, this Superintendent was replaced by an official styled, for the first time, “Deputy Minister of Game and Fisheries”.⁷ It will thus be seen that, although game was a late starter, the organization initiated by Dr. MacCallum at last took over the fisheries administration, which hitherto had been a rather shapeless mass of part-time officers. The compact, full-time game organization was the only real skeleton on which to build up the muscle of a modern Department.

From 1907 to 1946 the reorganized Game and Fisheries Department, now headed by a Minister, made steady progress in improving and enforcing the conservation laws. A staff of permanent enforcement officers was appointed and supervised. Biological knowledge and practical experience were used to impose bag and creel limits in keeping with the available resources and to adjust open and closed seasons for fishing. Next, the Department set aside large areas of Crown land in northern Ontario, to ensure permanent survival of game and fur-bearers. It also gave its attention to restocking the waters of the Province, establishing a Fish Culture Branch and acquiring some twenty fish hatcheries and fish-rearing ponds. Public sentiment in favour of conservation was growing apace; and sportsmen formed organizations all over the Province with the aim of educating the public to a proper appreciation of the economic and recreational values of our wildlife. The tourist trade (which may be said to have started in 1880, when the C.P.R. reached Nipigon) was also in full swing, and provided the people of Ontario with a new incentive to make the most of their game and fish resources.

In 1909 Kelly Evans conducted a Royal Commission to enquire into the state of Ontario's game and fisheries.⁸ He reported that the laws themselves were now adequate, but that the Department's organization needed improving. He proposed the appointment of wardens paid on commission, and a complete overhaul of the fisheries and game protective services, to include a smaller full-time professional force. Evans' ideas were far ahead of his time, but eventually many of his recommendations were adopted. It was a result of his advice that in 1914 the Game and Fisheries Department gained independent status, under a Deputy Minister of its own.

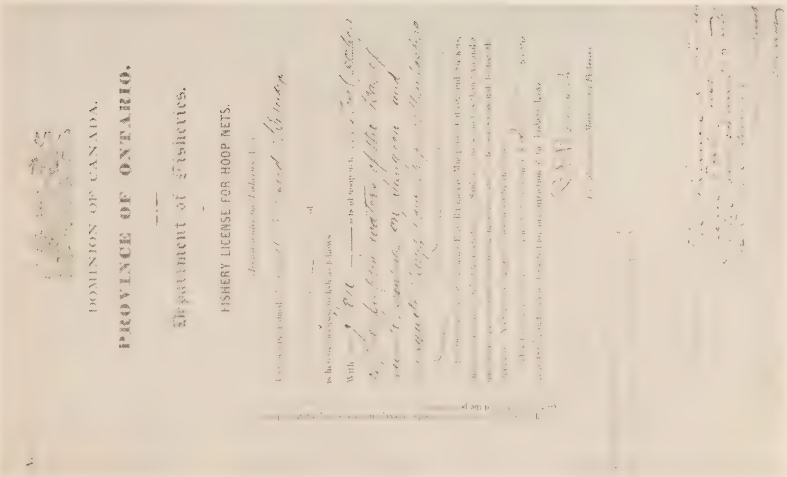
In 1925 a biological section was set up under Dr. H. H. MacKay and his first biological studies of our waters were undertaken. This section was expanded three years later into a Biological and Fish Culture Branch, uniting the Department's biological and fishery activities. Its small permanent staff was amplified during the summer months by employing biologists from the universities. Another step forward was the starting in 1926 of an Experimental Fur Farm near Kirkfield, Victoria County, to furnish the public with economical methods of profitable fur-breeding.⁹ A laboratory for the study of the diseases of fur-bearing animals was also built. However, the falling market for furs during the depression years led to a curtailment of the work and to the transfer of the laboratory equipment to the Ontario Veterinary College at Guelph.

In the years after the First World War, as automobiles came into general use, hunting pressure greatly increased. Two exotic species, the ring-necked pheasant, introduced in 1890, and the European hare, which went wild from a Brantford farm in 1912, were attracting more and more attention in the most densely settled areas. The "opening day" pressure of pheasant hunters was such that, in an effort to distribute the pressure more evenly, townships in the pheasant range were given authority, commencing with Pelee Island in 1934 and a number of "mainland" townships in 1937, to limit the number of pheasant hunters and sell special township licences. The Department prescribed a minimum number of licenses which had to be sold to "outsiders". Deputy game wardens, who were often conservation-minded sportsmen offering their services voluntarily, were used to help enforce the regulations.¹⁰

In 1946 the Department of Game and Fisheries was amalgamated with the Department of Lands and Forests, becoming the Division



Conservation officer investigating poachers' traps, 1949



Fishery licence for hoop nets, 1888

of Fish and Wildlife. The merger represented a major step in the reorganization of the Department of Lands and Forests, second only in complexity to the original reorganization of 1941-43. First, leading personnel (foresters and biologists) of the two departments had to meet together frequently to mesh their separate operations and routines into a single unit. This involved the incorporation of certain sections of the former Game and Fisheries Department with the existing Lands and Forests branch organization, i.e. accounts, mechanical improvements (under Forest Protection), tourist camps (under Lands and Surveys) and staff records (under Personnel). Then followed the formation of a new Division of Lands and Forests out of the remaining Game and Fish operations, dealing with enforcement, overseers, district superintendents, biological and fish culture, hatcheries and game fish, wildlife, commercial licenses and fishing, and statistics. The new Division (Branch) comprised two main sections, one dealing with Fisheries, the other with Wildlife. It was divided into four main branches, namely Enforcement, Commercial Fisheries, Game Fish and Wildlife.¹¹ Dr. W. J. K. Harkness, formerly Associate Professor of Zoology in the University of Toronto, was appointed chief of the newly-formed Division; and Dr. MacKay became supervisor of wildlife management. The main reasons for the amalgamation were to bring together all the natural resources of the Province under a single administration; to free the former Department from the political influences which had chequered its history and affected its structure and staffing; and to put the extensive transport and communication facilities of the Department of Lands and Forests at the service of the game overseers and fish supervisors, who were henceforth included in the forest district organization. On the other hand, the Lands and Forests staff gained substantially through an infusion of biological expertise in their numbers. Under the new administration the emphasis shifted from protection and conservation to scientific management.

The number of the staff grew fast. At the time of the merger the former Department of Game and Fisheries had two biologists, two regional officers and one hundred and twenty-three game wardens. By 1964 there were twenty-two districts fully serviced, sixty-seven biologists and two hundred and fifty-one conservation officers employed. Some of the biologists worked in Research and Parks Branches, carrying out important functions totally unprovided for

in Game and Fisheries. As early as 1948 the game overseers became conservation officers; and the first wildlife management officers were appointed – semi-technical men whose work involved management of the Province's fish, fur and big-game resources. Through the Indian Affairs Branch of the federal Department of Citizenship and Immigration, a grant became available to bring the establishment of these officers up to full strength. They centred their activities at first on the problems of trapping. In December, 1946, a two-weeks' course was held at the newly-opened Forest Ranger School at Dorset, to instruct fish and wildlife specialists in the identification and ecology of the principal species of fish, birds and mammals in the Province. Fish and wildlife courses are now included in the thirty-three week Ranger School curriculum. Graduates from this course afterwards employed by the Department may return to the school for further courses. The conservation officers are selected from those graduates who show special interest in fish and wildlife work.

In 1959 the Ontario Legislature passed a Wilderness Area Act, enabling the Government to set aside tracts of land as wilderness reservations.¹² Public entry into these areas is strictly controlled; but they are available to scientific observers and researchers into wildlife. Subsequently, in 1962, the Department of Lands and Forests concluded another agreement with the federal Department of Citizenship and Immigration (Indian Affairs Branch) for a ten-year period.¹³ This agreement covers all phases of resource development, including both commercial and recreational fish and wildlife use, as well as forest fire protection and the harvesting of minor wildlife crops such as wild rice and blueberries. It provided for an annual program of development directed by a joint Canada-Ontario Committee.

Another federal-provincial agreement affecting Ontario fisheries was reached in 1959, by which the Federal Government undertook responsibility for sea-lamprey and general fisheries research on Lake Superior. Under this agreement the provincial Government became responsible for carrying on general fisheries research on Lakes Huron, Erie and Ontario and for the collection of routine statistics of the commercial and sport fisheries catches on each of the Great Lakes.*

*For further details of the struggle against the sea-lamprey see pp. 17-18 of this Chapter, and references in Chapter 23, pp. 17-18.

In 1960 the first chief of the Fish and Wildlife Division (now renamed Fish and Wildlife Branch), Dr. Harkness, died and was succeeded by his former assistant chief, Dr. C. H. D. Clarke.¹⁴ Clarke's aim was to continue the shift of emphasis from "protection" to "scientific management", in such a way as to provide for the widest possible use by the public of the Province's fish and wildlife resources, consistent with the principles of conservation. Soon after taking office he issued on March 2nd, 1961, a policy circular¹⁵ setting out specific objectives. First came the principle of "sustained yield", by which he meant the maintenance of a stock that would produce a sustained annual "harvest" of wildlife. "Hunting and fishing will be limited or regulated only to the extent that these activities limit the size of the parent stock." Second, every possible effort would be made to harvest the entire annual increment of fish and game species, and to increase this harvestable surplus. Third, the needs of fish and wildlife production would be carefully taken into account and fully considered in relation to the planning of other forms of land and water use in the Province. Lastly, "fish and wildlife are the basis for universally popular forms of recreation, which are of great benefit to the economy and morale of the population. Any plans, programs or legislation must be directed to promoting and encouraging public use, rather than restricting or discouraging it". As examples of the application of these principles, the circular quoted plans that were in hand for lengthening fishing and hunting seasons, increasing bag and creel limits, and giving anglers and hunters improved access to the forest by opening up more logging roads. It also stressed the general need for recognizing that logging and other forms of forestry are "important tools which the wildlife manager must learn to use".

With this general statement of present day policy in mind, we can now survey the growth of some of the important activities that have been associated with fisheries and wildlife in Ontario. We have already remarked on the spectacular rise of commercial fishing in the Great Lakes in the last quarter of the nineteenth century. During this period fishing techniques were revolutionized by the substitution of steam for sail, and later of oil for steam; by the introduction and mechanization of methods of refrigeration; and by the gradual improvement of fishing techniques (nets, trawling, etc.) and of the means of communication, culminating in the twen-

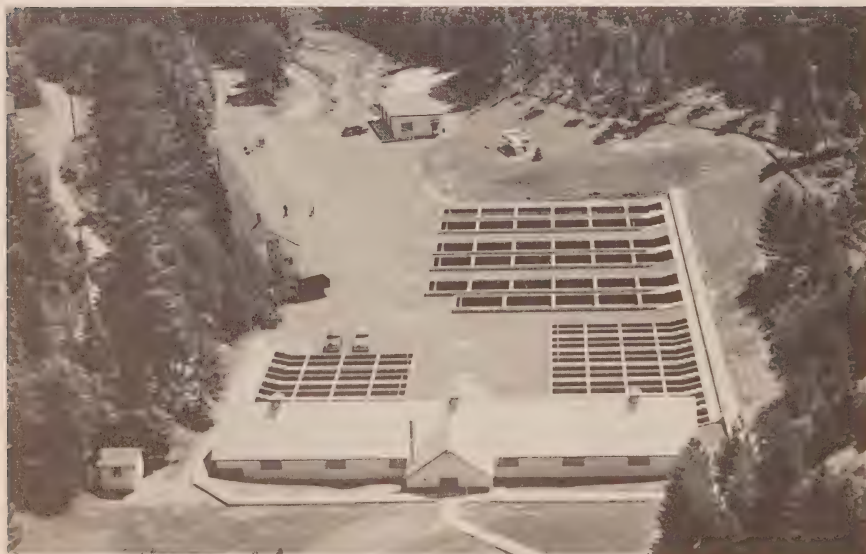
tieth century introduction of radio communications and the use of electronic devices for discovering fish shoals.

In the early part of this period two fish of major commercial importance – the Lake Erie sturgeon and the Lake Ontario Atlantic salmon – declined and virtually disappeared for two contrasting reasons. The sturgeon, which was once so common that farm labourers insisted that their employers should *not* feed them on it daily, gradually rose in price until in the 1890's it virtually priced itself off the market. The decline was due entirely to over-exploitation; too many fish were being caught.¹⁶ On the other hand, the Atlantic salmon of Lake Ontario, owing to its capacity for rapid reproduction, stood up much better than the sturgeon to exploitation by the fisherman. Yet it lost this advantage when the streams on which it depended for its spawning-grounds became obstructed and polluted through the spread of industrialization. The salmon's decline was due to its failure to survive in the new man-made environment of the Great Lakes. In the long run it has become evident that environmental changes in lakes and streams, often difficult or impossible to reverse, are more important in the decline of fisheries than exploitation.

For the better part of a century conservationists placed great faith on artificial fish-breeding as a means of counteracting the effects of over-fishing. In fact, it was looked upon as the answer to all fisheries problems. Hence the importance attached by government to fish hatcheries, illustrated by the taking over by the Dominion Government and its long-continued support of Samuel Wilmot's pioneering hatchery experiments at Newcastle.¹⁷ It was believed that the eggs of commercial species taken during spawning periods could be salvaged and hatched in jars and later returned to the water in the "eyed" state, thereby ensuring the future of the fishery. For the best part of a century the Federal Government, and then the Province, operated such hatcheries. But there is not the slightest evidence that any planting of "eyed" eggs ever had any effect save in waters where the species is not found at all. One or two new populations of wall-eye, or pickerel, seem to have had such a start; but we know now that a tub full of adult fish will do the job much better than the fry; because it is the rate of survival of the young fish that counts, and this is primarily a matter of environment. Some of the largest populations of fish ever known in the



Banding pheasants on a farm in Lake Simcoe District, 1961



A modern fish hatchery seen from the air, at Tarentorus, Sault Ste. Marie District

Great Lakes were produced by one spawning of very small parent stock while, by contrast, these large populations often produce very small "year classes". There are, however, many waters where cold-water species, such as speckled trout, can thrive but cannot reproduce. Here it is possible to use hatchery fingerlings to great advantage. Experience has thus taught us that hatchery-reared fish can be useful only if used properly. The proper use consists of fish plantings for introductory purposes, i.e. in waters where no fish have been previously found; or where the existing fish have been cleaned out by poison or other means, and a new population is subsequently established; or where natural reproduction has to be augmented in periods of stress caused by adverse weather or by periodic worsening of the natural habitat. Efforts such as these nowadays absorb the output of our hatcheries.¹⁷

In one instance, however, hatchery fish are being used today to restore fish to waters emptied as a result of a partially natural change in environment. The sea lamprey, a parasite that lives by fastening itself to other fish and sucking their blood, inhabits all suitable waters that have unobstructed access to the sea. Sea fish are adapted to its presence and, while individuals suffer, populations thrive in spite of it. The trout and salmon of Lake Ontario had also, in the course of thousands of years, become adapted to it. Then in 1829 the Welland Canal was completed, circumventing Niagara Falls. The Falls had previously stood as a barrier between the sea lamprey and the fishes of the upper Great Lakes which, never having been exposed, remained unadapted to it. The Canal itself and Lake Erie were waters most unattractive to the lamprey; and its penetration to Lake Huron, where conditions were more suitable, took a long time. The first sea lamprey in the upper Lakes was recorded in 1921. Once established, however, it spread rapidly. In the years 1945 and 1946 the great lake trout fishery of Lake Huron collapsed, and the Lake Superior fishery was seen to be obviously doomed if nothing was done.

The answer could only be found in terms of international cooperation. After much discussion the United States and Canada signed in 1955 a treaty under which the federal authorities of both countries agreed to carry out a programme of research and management aimed at controlling the sea lamprey. A Great Lakes Fisheries Commission, representing industry, the federal governments and the

provincial and state governments concerned with the problem, was then set up. In a crash programme, credit for the success of which must go to the United States, one lampricide of hundreds tested was found to work so that the sea-lamprey can now be controlled. The role of our hatcheries is to help replace the vanished lake trout.* The alternative to this would have been to wait many years—perhaps thousands—until the trout of the Upper Lakes had adapted themselves to the lamprey as they once did in Lake Ontario.

The other major problem of the Great Lakes fisheries—that responsible for the loss of our salmon—is water pollution. At one time the worst harm we did to our waters was to throw bark and sawdust into them and let them become muddy with topsoil from our eroded fields. In 1899 two important, but contradictory, reports were received from the Dominion Fish Commissioner, Professor E. E. Prince, and from the Deputy Commissioner for Ontario, S. T. Bastedo. The former declared that “circumstances modify the effects of all forms of pollution, so that waste matters which could be deadly in one river will pass away and prove of little harm in another, where the conditions are different. Little is actually known of the effects upon fish life of these various pollutions from accurate and thoroughly scientific experiments”. In contrast with this, Mr. Bastedo said flatly, “there can be nothing more destructive of fish life than the depositing of sawdust in the rivers and lakes”. In 1900 Dr. A. P. Knight undertook experiments at St. Andrews, New Brunswick, to ascertain whether or not sawdust was harmful to fish life. His conclusion was that, although strong solutions of sawdust could poison fish and fish fry, reduce the quantity of oxygen dissolved in water and cause fish to move elsewhere, no stream could be pronounced offhand as poisoned by sawdust. Each stream must be studied by itself and the various prevailing conditions thoroughly understood before any judgment could be made.¹⁸

In 1926 the Fish Culture Branch of the Ontario Department of Game and Fisheries began a series of studies to detect pollution in suspected areas of the Province. Again in 1946-47 and in 1949 a chemical engineer was employed to investigate notorious cases of pollution in Southern Ontario. In the summer of 1950 a general evaluation of the problem in Northern Ontario was also undertaken.

*See Chapter 23, pp. 18-19 for an account of the new hybrid fish, the splake.

As a result, in the following year the Department of Health, the Ontario Research Council and the Department of Lands and Forests began to cooperate more closely. They concluded a detailed study of the Spanish River in Northern Ontario. They also began to bring more cases of water pollution into the courts: the number of prosecutions between 1946 and 1951 had been only eighteen, but in 1952 thirty-nine cases were investigated in court, and a Pollution Control Board was set up.¹⁹ In 1957 the responsibilities for investigation and control of pollution were transferred to the newly-formed Ontario Water Resources Commission.

In 1961 a study of plankton populations in the Great Lakes was begun, to determine the extent of pollution as indicated by the presence, absence or relative abundance of plankton forms. Now, every year water samples are taken from the lakes and submitted to the Ontario Water Resources Commission for analysis. Today, the whole effluvia of our modern civilization is consigned, treated or untreated, to the water. As a result, Lake Erie, for example, has had so much organic matter deposited in it that the animal life formerly found dwelling at the bottom of the lake has been replaced by a



Stream polluted by garbage dump

totally different kind of life that can tolerate such conditions. Naturally, in their turn the fishes have changed too. The whitefish, herring and pickerel that formerly fed on oxygen-demanding mayflies have become scarce, and their place has been taken by perch and smelt that feed on the midges that can tolerate prolonged exhaustion of oxygen.

In the 1950's smelt populations reached enormous sizes in Lake Erie, during their spawning period a few weeks in the spring of the year. Experiment by the industry with the assistance of the Department of Fisheries and the Department of Lands and Forests devised new ways of harvesting smelts by use of trawls. As a result the output of smelt from Lake Erie rose in one year to six million pounds, in the next to twelve and in the following year to twenty million pounds. In more recent years the greatest emphasis has been on the harvesting of perch.

* * * * *

The management of game fish in Ontario has a long history, dating back to the establishment in 1885 of a closed season on speckled trout, which is still in effect in some parts of the Province, though modified in others. Perhaps the most significant regulation of all was made in 1903, when the sale of all game fish was prohibited by Order in Council. This had an immediate effect on the harvest of bass and maskinonge, because it reserved these species entirely for sport-fishing. By 1887 the tourist trade in Ontario had developed to a point where non-resident anglers were required to take out a license – at first \$5.00; a few years later a tourist was defined as anyone more than five miles from home. In 1932 an attempt was begun to control the spread of noxious species of fish, by prohibiting the liberation of minnows and other small fishes to any waters except those from which the fish were originally taken.²⁰

Since the merger of the two departments, biologists have been appointed to direct fish management in the various Lands and Forests districts. They have employed such techniques as lake and stream surveys, fish population studies, creel censuses and fish harvest statistics from the commercial catch, to evaluate specific situations and recommend the best management procedures. As a result of their field studies and practical experience, it has become apparent that hatchery-reared fish, if used properly, have a signi-

ficant value in fish management. Such proper use consists of fish plantings for introductory purposes (i.e. in "new" waters), the maintenance of a fishery on a "put and take" basis, and the augmentation of natural reproduction in times of stress caused by adverse climatic conditions, or by periodical deterioration of the aquatic habitat.

During the past fifteen years much attention has been given to new aspects of managing game fish. Among these have been a steady trend towards more liberal regulations of angling; the removal of coarse fish from small inland lakes where angling effort was high; the establishment of better public access to natural water areas; the authorization of the raising and selling of bass and trout for restocking purposes and of trout for human consumption; the reclamation of small lakes for trout; and the use of electric shocking devices to study fish populations.

Incidentally, a household survey carried out by the United States Government in 1955 found that ten per cent of the population over twelve years of age hunted and eighteen per cent fished.²¹ These figures were confirmed by a similar survey made in Ontario, which supplied some evidence to show that we may have slightly fewer hunters and slightly more fishermen here. An unpublished Ontario mail survey of about the same date showed that ninety thousand resident deer hunters spent on an average seven million dollars a year on their sport. This figure takes no account of the tourist trade.

* * * * *

Hunting, like fishing, passed through its "destructive" phase before conservation became the watchword and management super-vened in the last twenty years. In the days of the early officer-sportsmen, the great game bird of the Province was the wild turkey which, in its best days, inhabited only some fifteen south-western counties. As fast as the forest of this, the richest part of agricultural Ontario, was cleared, the turkey retreated into the remaining forests until Edwin Tinsley, as Chief Game Warden, wrote its obituary in the early years of the twentieth century (1904), when its last stronghold, the "Gesto Swamp", was cleared and drained for the cultivation of burley tobacco by immigrant farmers from the United States. The shrinkage of its range inspired some of our

earliest game laws, and more recently attempts have been made to bring the wild turkey back, but in vain; the environment no longer exists.²²

If pioneer settlement destroyed the wild turkey, it brought a population explosion of the bob-white quail. This lovely game bird, which must at one time have been confined to our few natural prairies along the Detroit River, spread as far as Georgian Bay and Kingston. Toronto was then the centre for a good stock of quail. There must have been a combination of exceptionally favourable land-use and mild winters to bring about this result. Certainly, as pioneer farms lost their scruffiness, a period of harsh winters hit in the early 1850's and the quail disappeared. It was this that caused the "Sportsmen of Toronto" to agitate, and produced the Game Law of 1856. No law, however, could make quail return to land no longer suitable.²³ But the lands vacated by quails, or even not occupied by them, were suitable for game birds that this continent had never known. Around the turn of the century the ring-necked pheasant was introduced in the Niagara Peninsula and a number were held in pens at Rondeau Park for future breeding stock.

In 1910, for the first time, an open season for pheasant shooting was declared in parts of southern Ontario. It was closed after two years, but was reopened in 1924-25 in Lincoln and Welland counties, where the birds were plentiful. The season was then established in these counties on a permanent two-day-a-year basis. In 1922 propagation of pheasants was started at the Eugenia Game Preserve and moved later to Normandale and Codrington. These bird farms supplied the bulk of the pheasants released in the Regulated Townships.²⁴ Year by year, the number of these townships increased, as more municipalities appreciated the benefits that could accrue. Production was intensified, and the distribution of eggs gave way to that of chicks and poults. Today an average of fifty thousand birds are distributed each year; and the pheasant population has continued to grow over most of southwestern Ontario. From 1946 to 1951 the Wildlife Management Institute, Washington, carried out special studies of the pheasants on Pelee Island.²⁵ District staff started a banding programme during the 1950's to assess the contribution that planted stock were making to the pheasant population. The latest developments have been the establishment of privately-owned pheasant-hunting preserves, and of public shooting grounds

for pheasants in four provincial parks. Both of these steps seem to have been highly successful. Since 1956 the Department has authorized the propagation and sale of ring-necked pheasants on a commercial basis.

The ruffed grouse is found throughout Ontario and has always been our most important game bird. The earliest game law in Canada was passed with the protection of grouse in mind. Their population cycles are classical among those studied by game managers and biologists. The Hungarian partridge has, like the pheasant, been successfully introduced from abroad. Propagation was started at Eugenia Game Farm in 1926 and was later carried on at Normandale and Codrington hatcheries, birds being distributed from there almost every year from 1927 to 1937. It is believed that the original stock was imported into this continent from CzechoSlovakia. Since 1938 Ontario plantings have been made only with live-trapped stock taken from the thriving colony in the extreme east of Ontario; importation of any other strain of Hungarian partridge has been forbidden. In 1950 a biologist was assigned to the Kemptville District and the Fish and Wildlife staff of that district began a comprehensive study of partridge ecology. Census, banding, tagging, range evaluation and the interpretation of harvest information have all contributed to a better knowledge of this game bird. The insight thus gained serves to direct plantings of partridges into those areas which seem most likely to be able to support the "Hun" in reasonable numbers.

The traditional quarry of the Ontario hunter has always been the white-tailed deer. Deer were originally very abundant in the whole area south of the Pre-Cambrian Shield, but the dense forests of the hard-rock country knew them not at all. Deer thrive in brushland rather than in mature forests; therefore human settlement, with its attendant timber-cutting, creates improved habitat conditions, which result in a rapid increase of the deer population. On the other hand, in the agricultural areas south of the Pre-Cambrian Shield forest-clearing and fire, combined with deer hunting for the market, reduced their numbers. Between 1867 and 1892 they rapidly extended their range to the north, and crossed from the American side of the St. Mary's River at Sault Ste. Marie in 1887.²⁶ The first non-resident deer licence (ten dollars) was issued in 1888 and the first resident licence (two dollars) in 1896; at the same time a regu-

lation came into force banning the killing of deer in the water. In 1899 the bag-limit for non-residents was raised from one to two. Six years later it was recommended that all resident hunters must, like non-residents, take out a licence. In 1918 the licence fee was raised to three dollars. In 1909 the first Ontario guide was licenced. However, it was not until well on into the 1930's that road access was opened up to much of what is now considered the prime eastern deer range.

Initial steps in deer management began in the late forties and early fifties.²⁷ More highway checking stations were set up, mainly for enforcement. At these stations biological information was collected, to make possible classification of the age, weight, sex and habitat of the deer kill. The Timber and Fish and Wildlife Branches of the Department launched a programme to improve the winter habitat of the deer, for the purpose of guiding commercial operations.

The lands where the deer are now hunted were originally the paradise of moose. In the 1880's and 1890's Muskoka was the place for moose hunting; in fact, the moose was then unknown over most of "New Ontario." The new railway lines, however, brought with them fires and logging; and the moose spread rapidly north. The only limit of this process has been Hudson Bay itself, reached only recently. Moose are immensely tolerant of cold and snow; and there are certainly many times more moose in Ontario today than there were in 1867. In 1888, when the first deer licence was collected from twenty-two non-resident hunters, the moose simply did not count as a game animal here.²⁸ In the centenary year 1967 our revenue from moose licences may well be a million dollars.

In 1949 and 1950 the moose season was closed, to give opportunity for evaluating the state of the moose in the Province. The field staff of the Department perfected a method of census-taking from the air, by making flights orbiting at low levels over twenty-five-mile-square plots of ground during the winter, and recording the numbers of moose observed.²⁹ Estimates of the moose population rose dramatically; and further studies showed that moose in northwestern Ontario had a much higher rate of reproduction than was previously thought possible.³⁰ The season was reopened in 1951 and has since been extended.

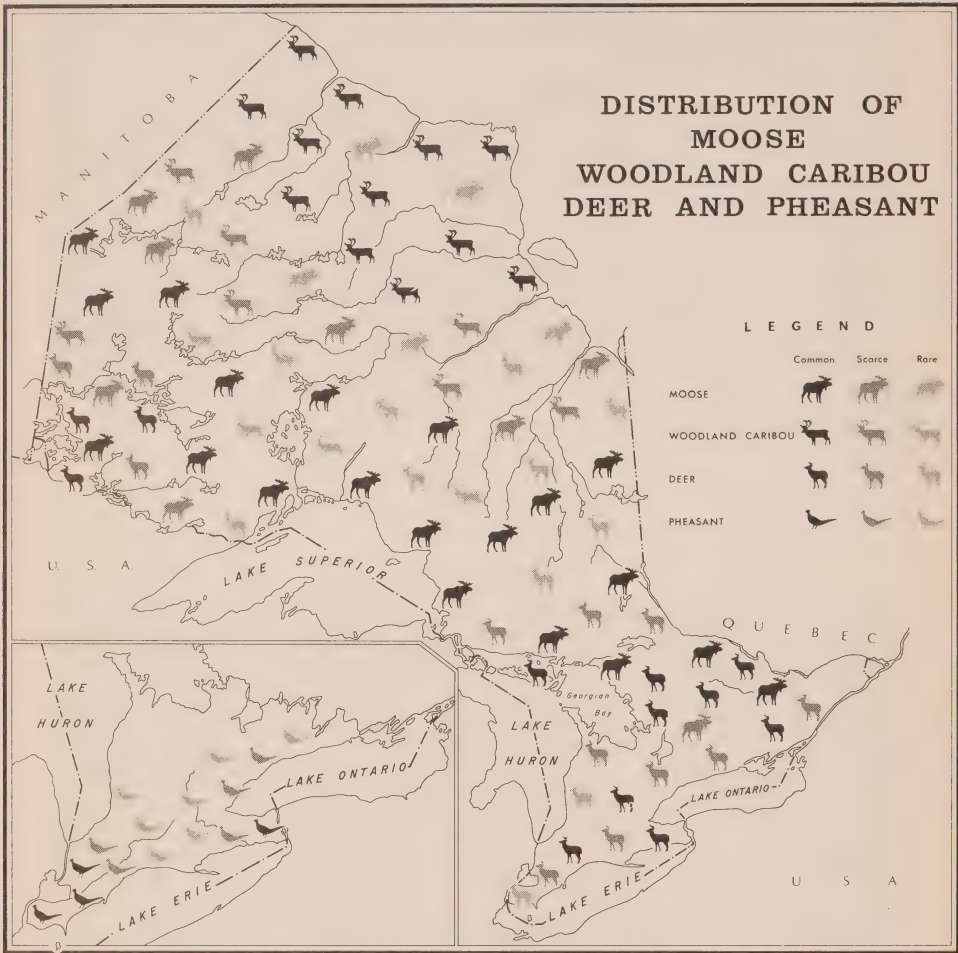
There is now no crowding in moose hunting and we could well hunt with three times the present intensity. With deer, on the other



Bear cub in a tree



White-tailed deer in snow



hand, though a few have gone far north, the mass of population is stopped 'cold' on a shifting northern line determined by a combination of temperature and snow depth. Beyond this line they cannot thrive, and at its edge 'good' periods of a few years are succeeded by 'bad'. All our deer range is accessible and in the east is heavily hunted.

In 1867, and for many years thereafter, the game of the 'north country', from Lake Nipissing to Hudson Bay, was the woodland caribou. This animal feeds largely on lichens, which are completely destroyed by forest fires and take from fifteen to a hundred years to regenerate. The era of logging expansion in the north, with its repeated burns, was an outright disaster for the caribou. Since 1929 this animal has had a close season, and its range has been reduced to little more than one half of the lands it formerly occupied – basically, the area north of the northernmost railway running east-west, with a broad wedge to Lake Superior.³¹ In this day of forest protection the caribou may make a come-back.

The black bear is found in almost every part of Ontario where a reasonable habitat is available. There are a few in the Bruce Peninsula; but in southern Ontario they are confined mainly to the Pre-Cambrian Shield and to the more fertile areas on its margin. However, bears are common enough in the north country, as far as the most northerly limits of the tree line. For many years there was no closed season for bears, though non-residents required licences to hunt any game, including bears; from 1942 to 1961 the shooting of bears was encouraged by payment of a bounty of ten dollars per head. Then in 1961 the black bear was given the status of a game animal; and in the following year residents were allowed to shoot bear either on a regular bear-deer licence or bear-moose licence in the fall, or on a special spring licence costing five dollars and twenty-five cents. Non-resident spring bear licences now cost ten dollars and fifty cents. The spring bear hunt is popular with tourists, and up to four thousand eight hundred licences were sold in 1958, a peak year prior to the licence fee increase in 1962. Currently, non-resident spring bear licence sales have been averaging two thousand annually.³²

The oldest game legislation in Ontario is that which provides for a wolf bounty.³³ In 1793 the Parliament of Upper Canada passed an Act to encourage the destruction of bears and wolves in different

parts of the Province; and in 1830 an Act was passed to hasten the extermination of wolves by allowing the bounty (£1 per head) to Indians. Today the wolf bounty is still with us, though perhaps its days are numbered. That the original purpose of the legislation failed is evident from the fact that wolves still thrive in all the non-agricultural lands of the Province. Furthermore a second species, the coyote or brush wolf, has entered the Province and has taken the place of the wolf in many settled areas. All this happened in spite of the bounty and in the face of persecution. Of recent years our attitude towards predatory animals has changed. As many as six hundred tourists have gathered in Algonquin Park in the evening just to hear wolves howl. Nevertheless, until a practical development is made in sport-hunting for wolves, the bounty at least serves as a cropping operation, to remove surplus wolves and keep the population down to the numbers required. Where wolves do real damage, modern methods are being developed to detect and destroy the actual marauder. But there is nowadays no more talk of extermination. In the forty years from 1925 to 1964, \$1,770,732 was paid out in bounties, to kill 93,561 wolves. The modern biologist and wildlife manager holds that, if the bounty were abolished, the wolf population would control itself, through natural limiting factors in each area.*³⁴

Hunting pressure is felt most keenly where water-fowl are the quarry. Ontario possesses an immense number of wild ducks and geese, including many migrants from further north and west; but the opening day of the season on any marsh open to the public sounds like a battlefield. Because of ruthless and indiscriminate destruction, laws were passed in Canada for the protection of ducks; but similar restraints were not practised in neighbouring American states. Moreover, the chief nesting grounds of the ducks and other waterfowl were out on the Prairies, where by the turn of the century marshes were being drained and filled in all along the migration routes, while shooting continued unrestricted.

Long ago, as now, the membership of the big private duck clubs included many Americans; and in 1892 they all paid the full twenty-five dollars non-resident fee, though one suspects that many an

*Where the limiting factor, deer-hunting, does not exist, e.g. in Algonquin Park, the controversy between biologists and trappers still continues. For further particulars of research into wolves, refer to Chapter 23, pp. 519-520.



JACK MINER *banding a wild goose at his bird sanctuary at Kingsville, Ontario*

American visitor out with friends never even knew that there was a licence. Dr. MacCallum used to print the names of non-resident licence-holders in his annual Game Report; and anyone familiar with the names of the nabobs and tycoons of the U.S.A. could pick them out and tell where they hunted. Today we derive about one-half of our big-game licence revenue from American tourists.

A significant occurrence in waterfowl history was the start of the Jack Miner Bird Sanctuary at Kingsville in 1908.³⁵ In that year eleven geese landed in Miner's pond in the spring to join others kept there. Although a portion of these were shot by Miner, sufficient remained to start the nucleus of the sanctuary flight. The banding of ducks for migration-study purposes was started at Lake Scugog, and was also carried on by Jack Miner at Kingsville. In 1916 the passing of an amendment to the Game Act, prohibiting the sale or

purchase of wild ducks, geese or other waterfowl and limiting the number of ducks that could be shot, met with general approval.³⁶ In the same year Great Britain (then representing Canada) and the United States signed an important treaty, the Migratory Birds Convention,³⁷ in which both countries agreed to enact protective measures. This heralded a joint relationship with respect to waterfowl protection which has lasted to the present date. The existence of this treaty automatically made the protection of migratory birds a matter of federal jurisdiction in both countries; with the result that now, among other things, waterfowl seasons are set in Ottawa, on recommendation from the Province. All later Canadian legislation amending the existing waterfowl acts has been made to conform with the terms of this Treaty. In 1935 a regulation was made prohibiting the feeding of migratory waterfowl for shooting purposes; and a year later the use of live birds as decoys was prohibited.³⁸ Since the Second World War migratory birds have had their ups and downs; and changes in the regulations have frequently been made, to conform with population levels. In recent years waterfowl shooting units have been established to provide opportunities for public hunting; these have proved to be highly popular with the public. The formation of the Ontario Waterfowl Research Foundation at Guelph in 1961³⁹ will aid materially in research and help maintain waterfowl population at a satisfactory level.

Besides dealing with waterfowl, the Migratory Birds Convention also protected a great variety of other migrating birds, large and small. Ontario has had a law protecting insectivorous and other beneficial species of birds since 1865.⁴⁰ Because the Treaty of 1916 explicitly did not protect such birds as native sparrows (song sparrow, vesper sparrow, gold finch and the like) of which there are many species, some non-migratory, Ontario continued to apply the 1865 Act until it was ruled legally to be completely duplicated by the Game and Fish Act (1946), and so finally dropped out of its honoured place in our Provincial statute book. But this means that it is still in effect and goes to show that we have surpassed the Treaty of 1916 in protecting our birds.

* * * * *

The fur trade in Canada is almost as old as the country itself. It still holds a position of importance in the economy of Ontario, par-

ticularly in the northern sections of the Province. The report of the Kelly Evans Commission of 1909 marked the first occasion on which serious thought was given to the fur trade as a provincial natural resource. The Commission found that the growth of population and the increasing accessibility of many of the remoter regions of the Province had led to a great decline in the numbers of nearly all kinds of fur-bearing animals. This condition made it necessary to impose a closed season on beaver and other animals for a period of years. Before long, muskrat pelts came into great demand, partly for the manufacture of so-called beaver hats and also for producing imitation seal skin. Fur dressers then and today found means of using muskrat to imitate nearly all costly furs.

After the First World War the prices of raw furs went sky-high and tremendous pressure was exerted by trappers, with the result that fisher, marten, beaver and lynx were almost exterminated. The Game and Fish Department then instituted a rigid system of licencing and recording of the fur catch, from trap to export or processing, as the case might be, in order to suppress the trade in illegal furs. In 1917 Ontario started the first Crown game preserves, in the shape of the Jack Miner farm and the Peasemarsch farm owned by Miss E. M. Marsh. Six years later preserves were extended north, and a series of Crown game preserves were set up around the places where the fur-bearers still survived. Preventing extermination has been the first step towards salvaging the fur trade; the next, restoration of commercial abundance, has been accomplished by doing away with competitive trapping on Crown lands. A start was made by the Game and Fisheries Department around the borders of Algonquin Park; then, after the merger with Lands and Forests in 1947-48, the programme of trapline management was spread to the whole of northern Ontario, including the District of Patricia. The basis of management became the registered trapline, a tract of Crown lands over which the licenced trapper held exclusive trapping rights. By 1950 practically all Crown land in the Province came under this system,* whose aim is to adjust the 'take' of fur-bearing animals to the actual production of furs. Today the Province has the largest and most extensive fur-management programme in Canada. Nearly nine thousand trappers, many of whom are Indians, now have a

*Indian participation was provided for by a special Federal-Provincial fur agreement. (See Chapter Twenty-Five).

direct interest in maintaining breeding stocks; and the new policy has, as was forecast at the time, made the trapper into "a man of substance, with an equity he can dispose of". Now with judicious management, by cropping only the surplus and keeping a healthy breeding stock of wild furbearers, Ontario should be able to maintain a foremost position as a fur producer for years to come.⁴¹ As a result of the new policy, game preserves as such have gone largely out of favour.

During the same period, too, the fur-farming industry came into its own in Ontario; today it has an annual production of around five million dollars' value – considerably in excess of that of the wild fur industry. The first fur farm in the Province was that of T. J. Burrowman, who from 1902 developed fox-ranching at Wyoming, Ontario. The greatest impetus to fur-farming was provided by the fantastic prices paid for breeding stock. By 1914 some thirty fur farms were operating in the Province; but not until 1920 were such farms licenced. In the next ten years over sixteen hundred licences were issued. Around 1925 interest turned towards the raising of muskrats in semi-captivity in large marshy areas which could be enclosed with animal-proof fences. Syndicates and companies were formed and proved successful in attracting investors; but they failed to raise muskrats on the scale they had expected. Heavy losses were sustained because of parasitic infections. From 1926 to 1937 the Department operated an Experimental Fur Farm at Kirkfield, to provide information on the breeding, feeding and diseases of ranch animals.⁴²

In the 1940's the first mutation mink appeared, capturing the imagination of the fashion designers and opening up the possibility of producing mink furs in various colours. Since then long-haired furs have gradually gone out of fashion; the number of fox ranches has declined, and the number of mink has increased. In 1963 the Canadian output of ranch mink, which then was worth approximately one million three hundred thousand dollars, was sold out in the first three and a half months of the selling season. What was said of fur-farming thirty-five years ago, holds true today: it offers the greatest return for the money invested of any type of farming.⁴³ Mink ranching is now well-established and takes its place among the prime producing industries of the Province.

* * * * *

In the long record of legislation to protect wild animals from elimination by hunting, one animal alone has until recently escaped protection – and that is, the hunter himself. Hunting is done with guns, mostly, and there have always been accidents, either through carelessness or through ignorance. The hunting season is a time of relaxation and recreation for some half a million sportsmen in Ontario every year; yet each fall a proportion of those who set out thus to enjoy themselves, fall victim to avoidable fatalities and injuries. To check this lamentable waste, in 1957 the Game and Fisheries Act was amended to empower the Department of Lands and Forests to establish a Hunter Safety Training Programme.⁴⁴ With the co-operation of sportsmen's organizations and service groups, who provide the training, it has become possible to compel all new hunters to obtain a certificate of competence in gun handling and firearm safety before going out to purchase their first hunting licence. A similar effort is also being made to instil a sense of responsibility in the careless. By a 1961 amendment to the Game Act, anyone who, while hunting, uses a firearm without reasonable consideration for persons or property is guilty of the offence of careless hunting. Offenders can be convicted of a variety of offences, including violations of the Game Law, and can be debarred from holding hunting licences for a period of years.⁴⁵

These measures are but one aspect of an imposing growth of what may be called 'public conscience' about wildlife and its survival in this Province. A healthy sign of this is the multiplication during the last few years of nature students, nature photographers, bird watchers and the like. They carry no guns or rods; but they carry cameras, binoculars, sketch books and note books. Once a mere handful – as in the days of Dr. MacCallum – they are now legion; and they form among themselves, though still mainly as individuals, an increasingly powerful 'pressure group' favouring the conservation of wildlife and the protection of its essential environment. To them commercial interests and governmental agencies alike must pay greater heed as the years go by.

THE EXPANSION OF PARKS AND RECREATION



In the fall of 1953 the Department instructed its seven regional foresters to travel through the United States and inspect all the parks of that country, national, state and municipal.¹ The main reason for the trip was a realization on the part of the Ontario Government that it was facing a big new social problem, the provision of recreational facilities for the growing population of the Province. As E. L. Ward, the regional forester at North Bay, put it, "where population increases locally or through an influx of tourists, and the area of publicly-owned land decreases . . . (there) comes the inevitable clash between the land-owner and the potential recreationist."² The seven foresters hoped that their American visit would give them ideas that would help them formulate a new parks policy

for Ontario. On their return, they discussed their findings at the annual conference of district foresters held in Toronto early in 1954.

Everyone was in agreement about the urgency of the need. Population was rapidly expanding, partly through natural reproduction and partly through immigration. By 1961 only twenty-seven per cent of this population lived in the rural parts of the Province; the remaining seventy-three per cent lived on less than one per cent of its total land area.³ The age-level of the population was falling, and it included a higher proportion of young people who wanted sport, travel and exercise. People in general had much more leisure time at their disposal. Nearly every family now owned one or more cars, but many could not afford to own a cottage in the countryside. Therefore, the provision of more public recreational areas, i.e. parks, was a necessity for the mental health of the community. In addition, the tourist trade was growing in importance, and constituted a challenge to Ontario to offer more facilities and attractions, such as would keep these tourists from moving on to spend their money elsewhere.

The first problem was to get more land. In northern Ontario there was still plenty of land available, since most of it was owned by the Crown; but in the south the position was different. As far north as Lake Nipissing there was not enough land open to the public; therefore, what was required would have to be bought or donated, often at considerable cost. The Government, said the foresters, must reconcile itself to spending money that it could never hope to recover in revenue from the parks. Subsequently, they defined this statement more closely. The cost of acquiring and developing the land itself must be written off as unrecoverable; but the resulting new parks could be expected to pay for their own operating expenses. The foresters went on to stress that once the land had been acquired, long-term planning, carried out by experts according to set standards, would be a vital necessity.

The conference was by no means clear who should take responsibility for the new parks. The Department of Highways already possessed a number of small roadside parks; these, it was felt, should be left undisturbed. In the north, responsibility clearly lay with the Department of Lands and Forests; but in the south recreational areas might be the responsibility of either the Lands and Forests, or the Department of Planning and Development.⁴ Inside the Depart-

ment of Lands and Forests, the responsibility would naturally fall on the Division of Lands and Recreational Areas; so at this time there seemed to be no need to set up a separate Division of Parks.

The first result of all this thinking was the passing of a new Provincial Parks Act through the Legislature in 1954. Introducing the measure, the Hon. G. H. Challies (Minister without Portfolio) indicated that the Government was aware of the population pressure and impressed with the urgency of acquiring more land for park purposes.⁵ The Act introduced order into the system by bringing all the existing acts (covering provincial parks, Long Point Park, Presqu'île Park, etc.) under a single authority; but it left undecided whether that authority was to be the Department of Lands and Forests, or not.⁶

The new Act was in four parts, of which the first three dealt with three different kinds of parks, and the fourth was a general section. All existing parks were to continue. Those designated under Part 1 were to be administered by the Department of Lands and Forests; they included the large northern parks and possibly Rondeau and Ipperwash. Those designated under Part 2 were to be administered by commission, and were placed under an unnamed Minister; they included Long Point and Presqu'île. Designated under Part 3 were smaller parks with more limited facilities, such as the Department of Highways' roadside picnic areas. They too were to be administered by an unnamed Minister. It was recognized that other Departments such as Municipal Affairs, Planning and Development and Highways had an interest in parks; and there was even some talk of creating a new Department of Parks, though Premier Frost in the Legislature denied the rumour.⁷

The 1954 Act remained in force only four years and was revised in 1958. By then Long Point and Presqu'île Park commissions had been dissolved and these parks had been transferred to the Lands and Forests Department. The three different categories of parks listed in the 1954 Act remained only nominal; no parks had been classified under Part 3. The Act of 1958 continued the basic principles of 1954, but laid it down that henceforth all provincial parks were to come under the Department of Lands and Forests.⁸ There were, of course, other parks in Ontario besides provincial parks. In order to develop a consistent policy which would cover them all, an Ontario Parks Integration Board was set up on April 1st, 1956 by Act

of the Legislature.⁹ This Board consisted of the Minister of Lands and Forests, the chairman of the Niagara Parks Commission, the chairman of the St. Lawrence Development Commission (later renamed the St. Lawrence Parks Commission), the Provincial Treasurer and the Minister of Planning and Development (subsequently Economics and Development); in 1964 the Ministers of Agriculture, Tourism and Information, Energy and Resources Management and Public Works were added to its membership. The Board's purpose was "to supervise and control matters of major policy concerned with the acquisition, establishment, development and administration" of the various types of park in Ontario.¹⁰ In 1960 parks formed under the Conservation Authorities Act and Parks Assistance Act were included in the terms of reference,¹¹ and an advisory committee of senior officers of the various bodies involved set up; but at this point the new machinery seemed to slow down. The advisory committee functioned from 1956 to 1960, but was then dropped.¹² Originally, it was envisaged that the Board would have money to spend on various projects; but no such money was forthcoming.¹³ Today, therefore, the Board has no funds of its own; instead the various departments responsible to it themselves appropriate whatever may be required. For some years the Board watched over the estimates of the Parks Branch of the Lands and Forests Department and the St. Lawrence Development Commission. Though it does so no longer, it still reviews major policy changes and approves the purchase and acceptance of all new park areas.

At this point in the history of parks control, we may usefully digress to consider the later history of Quetico Provincial Park. In Chapter Fourteen we discussed the origins of this park and its relation to the Superior National Forest in the State of Minnesota, directly across the American border. In the United States in the years following 1909, American conservation enthusiasts engaged in bitter verbal skirmishes to prevent any further destruction of the Rainy River watershed. Thus in 1925, they battled with E. W. Backus, the well-known timber baron, and after a long fight persuaded the International Joint Commission not to sanction his plan for water control in the watershed.¹⁴ From this struggle emerged a group known as the Quetico-Superior Council, which existed "for the sole purpose of obtaining, with the consent of the Province of Ontario, a treaty between Canada and the United States

to protect and expand the rare public values in the Rainy Lake watershed."¹⁵ In connection with this scheme the American and Canadian Legions put forward proposals to create a joint park which would be dedicated to a century of peace between Canada and the United States and to the soldiers of both countries who fought in the First World War.¹⁶

In 1934 the United States Government took cognizance of these suggestions and President Franklin D. Roosevelt appointed the President's Quetico-Superior Committee. Sixteen years later a Canadian committee, the Canadian Quetico-Superior Movement, was formed with Vincent Massey as its chairman; but its projects have been essentially educational, and it has not tried to exert the same pressures as its American counterpart.¹⁷ However, negotiations to create an international peace park went on and crystallized in 1938, when the United States Government formulated a definite plan. The advent of the Second World War no doubt postponed its further progress.

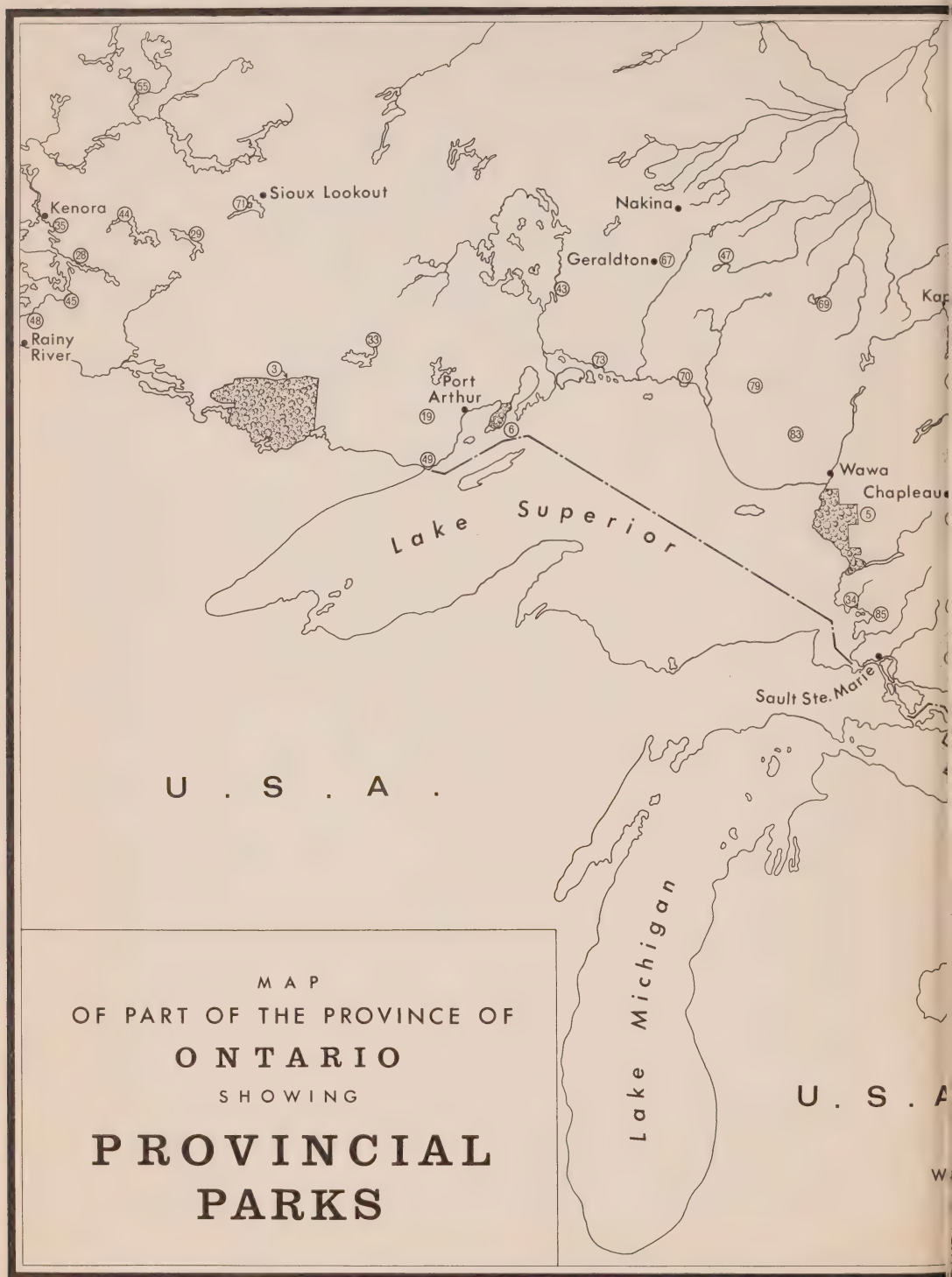
The Department of Lands and Forests had always looked with some doubt on the proposals made by partisan groups in the United States about this subject. In 1954, however, the Department began to modify its attitude, perhaps because it was paying more attention to the recreation problem without, however, giving up its conception of the multiple use of parks. In that year, then, the plan for an international park was again brought before the American and Canadian Governments; but no action was taken.¹⁸ Five years later, in 1959, the project once more became the subject of notes passing between the Governments of Canada, the United States and Ontario. But now Premier Frost took up the position that while the plan of the President's Quetico-Superior Committee to set aside by treaty the area on both sides of the border sounded well and good, the Government of Ontario could not entertain it. Making treaties with a foreign government was beyond the jurisdiction of the Province, and to agree to one would be, in effect, to relinquish sovereignty over the area and freeze it administratively. Frost made it clear, therefore, that while his Government was prepared to exchange information with the United States and to co-operate in all ways concerning the administration of the border area, it would not consider making a treaty.¹⁹

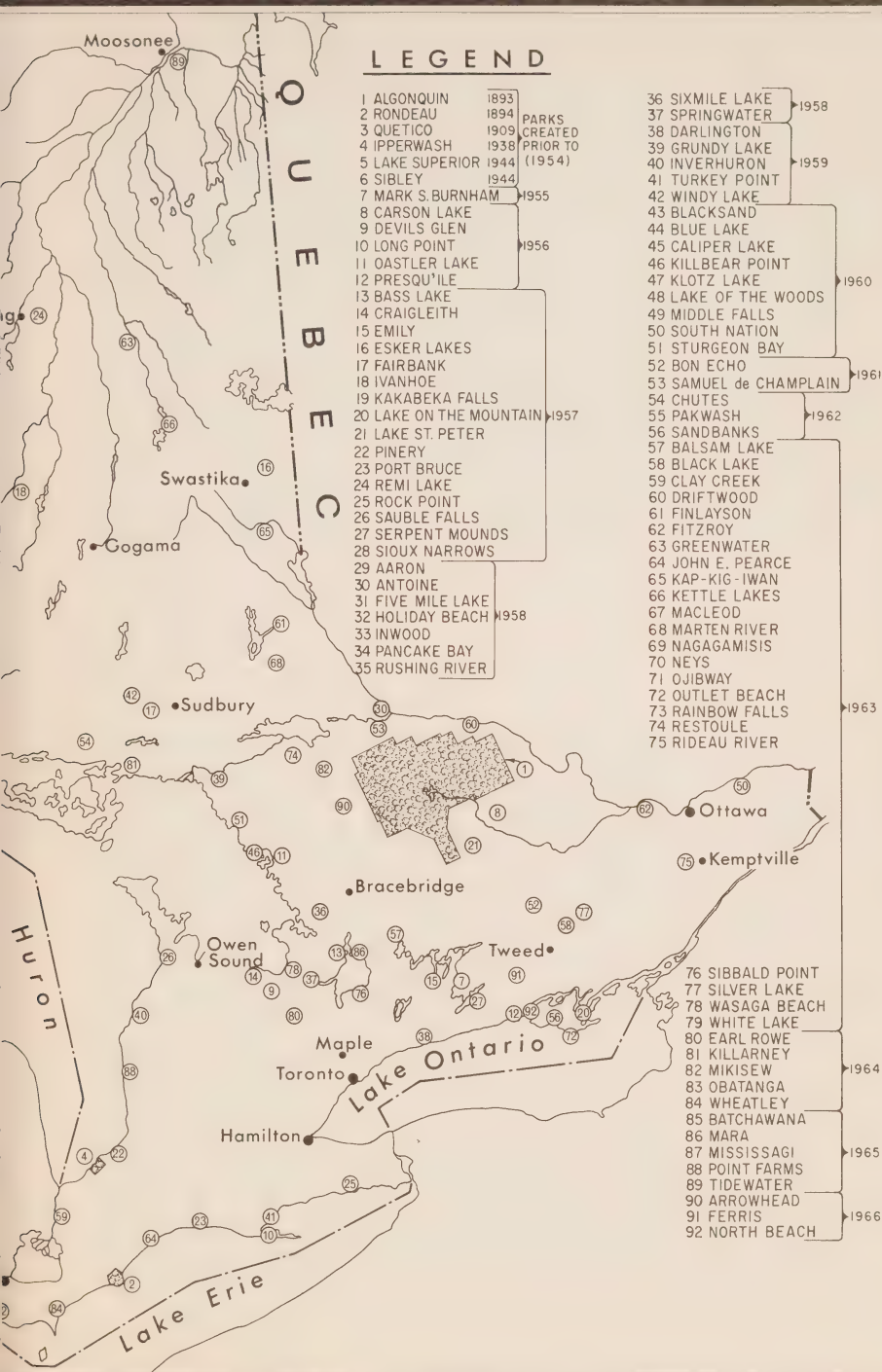
Noting, however, that informal exchanges of information were already taking place, Frost suggested that perhaps regular meetings

might be held every six months or so to discuss common problems and policies relating to the Quetico-Superior area.²⁰ The United States Government accepted this proposal; and it was agreed to set up a committee of six, three from each side, to hold semi-annual meetings.²¹ The Hon. J. W. Spooner, then Minister of Lands and Forests, A. S. Bray the regional director, Port Arthur, and W. B. Greenwood, then chief of the Division of Parks, were nominated to represent Canada on the committee.²² The American nominees were the Chairman of the President's Quetico-Superior Committee and representatives of the Departments of Agriculture and the Interior. This group, known as the Quetico Joint Advisory Council, has continued since 1961 to meet semi-annually, alternately in Canada and in the United States. It has no formal authority, but its deliberations reflect the concern of all to preserve the unique wilderness value of the Quetico-Superior country.

Although the district foresters' conference in 1954 had given no support to the idea of creating a new Division within the Department of Lands and Forests to administer parks, their viewpoint was obviously not shared by higher levels of the Ontario Government. Consequently, on October 1st, 1954, a new division, Parks, was created with W. B. Greenwood, the former regional forester at Peterborough, as its chief. Administration of the various parks was to be carried on through the district foresters' offices, with head office in Toronto acting in a general supervisory capacity.²³ In 1954-55 the total personnel of Parks Division at head office was only three; by 1965 it was fifteen. This increase corresponds to the increase in the number of parks and the responsibilities involved.

As soon as the new Division had been created, the Department started a survey of the whole Province to discover potential park sites, each district forester being made responsible for his own area. When such sites were located, the Parks chief visited them to assess their suitability.²⁴ The Parks Integration Board, set up in 1956, had the responsibility of approving the establishment of new park areas, in accordance with the recommendations of its advisory committee. Most of the survey work was carried out in 1954 and 1955; but the process is continuous and is still going on. The result is that while in 1954 there were only eight parks in operation (including the two commission parks), by 1956 there were twenty-one, by 1957 forty and by 1965 ninety.²⁵ All of these parks were not formally established by the year 1965 because of boundary, survey and land





acquisition problems; but all were in operation and open to the public – a condition more important than formal establishment. There were, in addition, fifty-four areas which had been set aside for parks, but were not open to use, being held in reserve until needed.

Many of these parks were acquired by purchase, some by gift and others by the setting aside of Crown land. About thirty were transferred from the Department of Highways; but ten of these were subsequently returned to Highways, being considered too small for provincial parks purposes.²⁶ As a general rule, the Department of Lands and Forests prefers a minimum size of five hundred acres for its parks.²⁷ In southern Ontario (i.e. south of the French-Mattawa Rivers line) population density and the need to avoid conflict with other park authorities have determined where parks should be located. In principle, it was laid down that they should be from one to two hours' drive from main urban centres; but in practice this ruling has turned out to be rather vague, meaning anything from forty to one hundred and fifty miles' distance. An alternative method of calculation was to draw circles of a certain radius around the heavily populated centres and locate the parks outside the periphery of these circles. However, it was recognized that increases and shifts of population might soon invalidate these calculations.²⁸ The Department, therefore, began working the other way around; it encouraged municipalities to provide parks of their own in highly populated areas. From the start, beaches were a prominent factor in deciding location plans. Eventually, parks have come to ring the entire Province along the shores of Lakes Ontario and Erie, and on Georgian Bay. In fact, west of a line drawn from Collingwood to Toronto, there are today no inland parks, with three minor exceptions. Of course, inside this inland area various parks are maintained by Conservation Authorities, but with these the Department has no wish to compete.

In the north, where population density is low, the criterion for establishing parks has been different. There parks are located no more than one hundred and fifty miles apart along highways 11 and 17, which are part of the Trans-Canada system. The immediate purpose of such parks is obviously to provide camping grounds for tourists journeying east or west across northern Ontario. But today there are plans afoot for a more extensive park development in the north.²⁹



Relaxing in the sun at Grundy Lake Park



Camping on the shore of Windy Lake Park

Once an area was approved as a park, the district office became responsible for drafting a plan for its development. This would designate the places suitable for picnicking, camping, parking, trailer sites and playgrounds and indicate existing roads, contemplated buildings and other facilities. The plan would then be submitted to head office for approval before any funds could be allocated to carry it out. For smaller parks, the district office was expected to assume most of the responsibility; but for larger, more complex parks, head office would provide technical assistance for planning to meet the various types of public use.³⁰

These uses, indeed, range over the whole gamut of human needs, from pure solitude and love of nature in the wild, to decidedly gregarious forms of semi-urban outdoor recreation. A British Columbian may naturally envisage a park in terms of "greenness and cleanness and spaciousness and peace; with mountain and rivers and long blue lakes, and flowers and giant trees and moose in morning mist; one with loons, and the song of wolves; one with clear air and pure cold water and with time, ample time to think, to dream, to feel content again".³¹ But a resident of urban Ontario, while dreaming the same dream for his annual summer vacation, might settle for a humbler, more sophisticated type of park for his weekend refreshment. For this reason many smaller parks in southern Ontario have been developed for picnicking, camping, swimming and other types of use limited to weekends. Other parks, especially the larger ones, are available also for canoeing, hiking, fishing and even, in some cases, hunting. Certain parks carry on educational activities interpreting the public interest in their local wildlife, nature and history. "The emphasis . . . is on recreational activities which cannot be indulged in at home, and should not be confused with recreation associated with an urban environment."³² The probable demand for a park's use dictates the rate at which its services are to be developed. Parks like Rondeau and Ipperwash, which are heavily used, are quite sophisticated and require electricity, comfort stations, etc.; while other parks, more recently opened, may need no more than simple facilities, e.g. earth-pit toilets. In general the Department's policy is to develop a park, not to its maximum, but to its optimum use.³³

It has been well said that "it is a characteristic of parks that their wildness is degenerating".³⁴ A recent study of users of the wilderness

canoe country of Superior National Forest in Minnesota has revealed that while nearly all visitors favoured preserving the area in its natural state, most of the same people indicated that they would also like to see the addition of fireplaces, tables, toilets, signs, grocery stores, telephones, first aid stations and docks! It is no wonder that tourists in search of peace, quiet and uncrowded places have to go farther away from home to find them each year!

From 1931 onwards a nominal charge of one dollar a day was levied on all vehicles entering Algonquin Park. This was collected for several years after the opening of the first road into the Park in 1933. Since 1957 a small annual fee, covering entry of cars into all Provincial Parks, has been substituted.³⁵ Commercial facilities are allowed in the Parks only on a concession basis and when the demand warrants them. All buildings put up for such purposes must be constructed and owned by the Department. Exceptions to this rule are Algonquin and Rondeau Parks until certain leases presently in force expire. It is not the policy of the Department to advertise parks facilities and programmes to any substantial extent. Since the Second World War demand for these facilities has kept pace with their provision, without entering into fields that some private commercial camping and outfitting concerns might consider to involve unfair competition.³⁶ However, the Department has carried out its own publicity for the parks by issuing useful publications, such as a Provincial Parks booklet; various checklists of birds, animals, fishes and reptiles, trees and plants found in Algonquin and Rondeau Parks; a weekly newsletter, *The Raven*, published during the summer months only in Algonquin; a description of canoe routes in Quetico and Algonquin; and a number of books and pamphlets such as *The Reptiles of Algonquin Park* (Algonquin Park), *Ferns and Flowering Plants of Rondeau Provincial Park*, *H.M.S. Nancy and the War of 1812* (Wasaga Beach) and *Eildon Hall, Sibbald Memorial Museum* (Sibbald Point Park). All these are primarily informative in character.

In the larger wilderness-type parks – Algonquin, Quetico and Superior – fishing has always been allowed on purchase of a licence, but hunting usually has not. However, after 1954 the Department came to the conclusion that hunting was a form of recreation and, in accordance with the multiple-use concept of land utilization and with due regard to park values and interests, decided to permit it in

NOTICE

RESPECTING

DUCK SHOOTING

AT RONDEAU.

The following Regulations have been adopted by Order-in-Council dated 6th October 1896 respecting the shooting and taking of Wild Ducks and other water-fowl in the waters adjoining Rondeau Provincial Park and in Rondeau Harbour and all sportsmen and others are required to take notice of the same and to govern themselves accordingly:

REGULATIONS respecting the shooting and taking of Wild Ducks, and other water-fowl in the waters adjoining Rondeau Provincial Park and in Rondeau Harbour, under section 4. Chapter 60, 59 Victoria.

No steam-yacht, sailing craft or vessel of any kind (except rowboats or canoes) shall be used to aid or assist in the shooting or taking of Wild Ducks or other water-fowl in the waters adjoining Rondeau Provincial Park or in Rondeau Harbour, whether by towing rowboats or small craft, causing the ducks or other water-fowl to rise, or in any other manner whatsoever.

No boats, nor any of the devices known as skags, monitors, or other similar devices, used in the shooting or taking of Wild Ducks or other water-fowl in the said waters or Harbour, shall be stationed or anchored at a greater distance than one hundred yards from the shore or outer line of rushes; and to prevent disputes, the Ranger of the said Rondeau Provincial Park shall have power to define the said shore or outer line of rushes, and also to decide as to the same in individual cases.

No person shall shoot or take more than 150 Wild Ducks or other water-fowl in said waters or Harbour during any one year.

THE PENALTY FOR VIOLATING ANY OF THE FOREGOING
REGULATIONS SHALL BE A FINE NOT EXCEEDING

\$50! AND NOT **\$20!**
LESS THAN

Together With Costs of Prosecution to be Recoverable in the Same Manner as Under Section 21 of the Ontario Game Protection Act

A. S. HARDY,

Toronto, 2nd October, 1896.

ATTORNEY-GENERAL

Cloth poster on duck shooting in Rondeau Park, 1896

certain cases. Today waterfowl shooting is permitted during the open season and for an annual fee in Rondeau, Presqu'île, Holiday Beach, Darlington and Long Point. The shooting of stocked pheasants has been introduced in four other parks on a daily basis for a five-week season. In thickly-populated areas this use of parks land has been highly successful. The hunting of moose and deer in two townships, Bruton and Clyde, both in Algonquin, has been continued since they were added to the Park in 1960. The hunting is controlled by a system of temporary hunting camp permits and a free daily hunting zone. In a section of Lake Superior Park hunters may take moose during the regular season by purchasing the usual licence.³⁷ Such hunting not only fills a recreational need, but also facilitates wild life management.

The smaller parks present a great variety of other attractions.³⁸ For example Mark S. Burnham Park, near Peterborough, is a native forest area with many fine and rare trees; it preserves the original flora and fauna of the district, and therefore offers a special incentive to visiting naturalists, botanists and ornithologists. Emily, near Lindsay, has the largest ironwood tree known in Ontario, with a trunk circumference of some 83 inches at a four-foot height from the ground. Its fifty-nine acres extend along the bank of the Pigeon River, which is said to afford the best 'muskie' fishing in Ontario. Craighleith, on the south shore of Georgian Bay, is only a small park with a rocky shore of flat, limy shale; but embedded in these layers of shale are countless trilobites, nautiloids, brachiopods, graptolites and other fossilized creatures that date back some three hundred and seventy-five million years, and form a geologist's paradise. Presqu'île and Pinery, with their sand dunes and other interesting land formations, offer bird watchers excellent stations for the observation and study of bird migration in the spring and fall. Inverhuron, on the shores of Lake Huron, offers good opportunities for studying the relics of former Indian dwellers in the area – including their fire-pits, their midden heaps and their camp remains. Serpent Mounds on Rice Lake also provides a fascinating site of Indian culture, once believed closely related to that of the Hopewellian Indians of the Ohio Valley. Scenery is the main attraction at Kakabeka Falls near Fort William and Port Arthur, where the 128-foot cataract of the Kaministiquia River plunges into the valley and recalls the legend of the Ojibway maiden who once guided her Sioux



Conducted nature hike, Lake Superior Provincial Park, Sault Ste. Marie District, 1963

captors to their doom. Another popular scenic spot is the small park at Devil's Glen near Singhampton, with its magnificent views over the valley of the Mad River. This is a spot for summer camping – a favourite sport that has grown by leaps and bounds with the proliferation of smaller parks. Some of these are also famous fishing spots. The fishing enthusiast looks to catching pike at Obatango Lake Park, near White River; pickerel at Kap-Kig-Iwan; speckled and lake trout at Greenwater Lakes twenty miles west of Cochrane. And of recent years (since 1960) Darlington, Kakabeka and Pinery Parks have been opened for winter sports, skating, skiing and tobogganing.

Since 1954 there has been an intensive development in the interpretive programmes of the provincial parks. This interpretation “provides the visitor with the key to the park environment and enables him to understand the points of greatest interest and inspiration. It enlarges the visitor's experience and presents the park environment and its complexities of nature in recognizable and



Ontario naturalists watching birds in Rondeau Park, 1954

understandable terms."³⁹ Such programmes, begun and developed in Algonquin Park, had by 1964 become a regular feature in twelve other parks.⁴⁰

No wonder the total number of persons using the parks has grown enormously since 1958, when the first official records of statistics of visitors began to be kept. In that year 2,105,068 visited the existing forty provincial parks; by 1964-65 the number had grown to 9,147,218 visitors to ninety parks.⁴¹ In the same period the number of campers increased nearly six-fold, from 165,000 to 916,281. In 1956 seventy-two per cent of all those who camped in the parks were residents of Ontario; but in 1964 this proportion had fallen to sixty-six per cent, while the proportion coming from the United States had risen from seventeen to twenty-nine per cent.⁴² Evidently, therefore, the parks are supplying a good incentive to come to Ontario. Since 1953-54 the visitors have brought in a total revenue of more than seven million dollars; while during the same period the Department has spent nearly thirteen million dollars on

operating costs, sixteen and a half millions on improvements and over four and a quarter millions on purchases of land.⁴³ Needless to say, the value of parks cannot be measured primarily in terms of money. One can only say that without the provincial parks system the frustration in our recreational activities would today be formidable indeed.

In 1962 a new branch, Conservation Authorities, which had originally formed part of Planning and Development, was transferred to the Lands and Forests Department.⁴⁴ The Branch's function was to oversee the activities of the numerous local conservation authorities in the Province. These authorities are corporate municipal bodies created at their own request by Orders in Council. They band together to take concerted action to preserve the water resources of watershed or drainage basin. Originally the authorities were concerned only with controlling floods; but latterly the scope of their activities has been widened to take in other matters related to water control, such as soil conservation, land use, forest conservation, wild life preservation and ultimately recreation.⁴⁵ The recreational use of the land of a conservation authority is secondary to its use for other purposes; but with the passing of time it has increased and now supplies a useful service.⁴⁶ The parks maintained by conservation authorities usually lie within twenty to fifty miles of urban centres and are therefore outside the boundaries of municipal authorities, but too close to built-up areas to interest the Department of Lands and Forests.⁴⁷ The one exception to this is the Metropolitan Toronto Regional Conservation Authority.

The prototype of all these authorities was the Grand River Valley Conservation Commission set up by Act of Parliament in 1938; all the other authorities owe their existence to the Conservation Authorities Act of 1946. Their park activities soon became large enough to justify the inclusion of the Minister of Planning and Development on the Ontario Parks Integration Board in 1956 and the chief engineer on its advisory committee.⁴⁸ In 1964, the Conservation Branch was transferred to the care of the newly-created Department of Energy and Resources.

In the meantime, the concentration of attention upon the recreational function of parks had caused a feeling that the original (Kirkwood's) objective of parks as nature reserves was not being sufficiently emphasized. Some naturalists and conservationists ex-



JIM McQUOUT (on right) beside the shack where he lived while building the castle



Wilderness Castle built at White Otter Lake, a wilderness area in Kenora District, by trapper JIM McQUOUT with his own hands. As restored after his death (1920) by the Dept. of Lands and Forests

pressed the view that "all park objectives can be met in a single park only if it is suitable in character and large enough to permit setting aside separate areas in which specific objectives are emphasized. Such parks should be zoned and each zone managed so as to preserve its values for the specific purpose for which it is best adapted. Recreation which interferes with the preservation of natural conditions, such as organized games, should be restricted to definite areas laid out for their needs . . . Recreational pursuits which demand the use of mechanical power should be strongly discouraged."⁴⁹

This view led directly to the creation of a new type of park primarily concerned with conservation. The Wilderness Areas Act of 1959⁵⁰ authorized the setting aside by Order in Council of areas of public land for preservation, as nearly as might be, in their natural state and for research and educational purposes, the protection of the flora and fauna and the development of historical, aesthetic, scientific and recreational values. The Act gave the Minister of Lands and Forests powers to protect the fish, animal and bird life in these areas and to exclude visitors and domestic animals, save under permit. Subsequently, forty such wilderness areas have been proclaimed, of varying character and significance. They include Fairy Point in northern Ontario, which contains a number of Indian pictographs, or rock paintings; Massacre Island in the Kenora district, famous as the scene of the massacre in 1736 of one of the explorer La Verendrye's sons, together with a Jesuit missionary and nineteen other men; Sioux Mountain, near Sioux Lookout, where the early settlers used to keep watch for marauding bands of Sioux Indians; old Fort Albany, site of one of the earliest trading posts of the Hudson's Bay Company; Jones Road, Kenora, containing a stand of red pine which is over 300 years old; White Otter Lake, with its unique "Wilderness Castle" built of pine logs by a Scottish trapper with his own hands, for a bride who never appeared; Bat Cave, near Port Arthur, the wintering-over haunt of a large horde of bats and habitat of several rare plants; and The Sleeping Giant, a geological formation resembling a recumbent man, in Thunder Bay near the Lakehead. Much the largest of the wilderness areas are Cape Henrietta Maria, covering 144,000 acres near Kenora, and Pukaskwa, six thousand acres lying between White River and Lake Superior. These, however, are exceptions to the

rule, since the Act of 1959 (c. 432) laid it down that wilderness areas of over six hundred and forty acres in extent might be subject to "utilization and development of their natural resources", e.g. hunting and prospecting. This qualification (introduced originally to forestall opposition from mining interests) has aroused public criticism on the ground that it tends to discourage the creation of wilderness areas larger than six thousand and forty acres, both in Algonquin Park and elsewhere.

During the past five years, the development of parks has come more and more under the influence of the modern concept of multiple land-use. This has been described as "the deliberate and carefully planned integration of various uses of land so as to interfere with each other as little as possible, with due regard to their order of importance in the public interest."⁵¹ Multiple use is much more than an assemblage of simple uses. It implies the conscious and coordinated management of *all* the renewable resources of any given area for six major purposes. These can be defined as (a) production of wood (timber) (b) provision of a nature reserve (c) provision of a habitat for fish and wildlife (d) provision of outdoor recreation (e) protection of watershed land for the growing of forests and maintenance of water supplies (f) development of other resources such as agriculture and mining.⁵² In the provincial parks this policy of land management recognizes recreation as the primary use. Inside the larger provincial parks place should be found for all possible recreational activities that are in keeping with the environment. This includes camping, picnicking, bathing, boating, canoeing, hiking, hunting, fishing, winter sports, scenery viewing and nature observation. Some of these recreational pursuits can share the same environment; others cannot. Some are compatible with other alternate uses of land in varying degrees of intensity. Thus, for example, parts of the larger parks are logged. Each park, however, must have areas where no logging is allowed, such as nature areas and those given up to camping, picnicking and enjoyment of scenery.

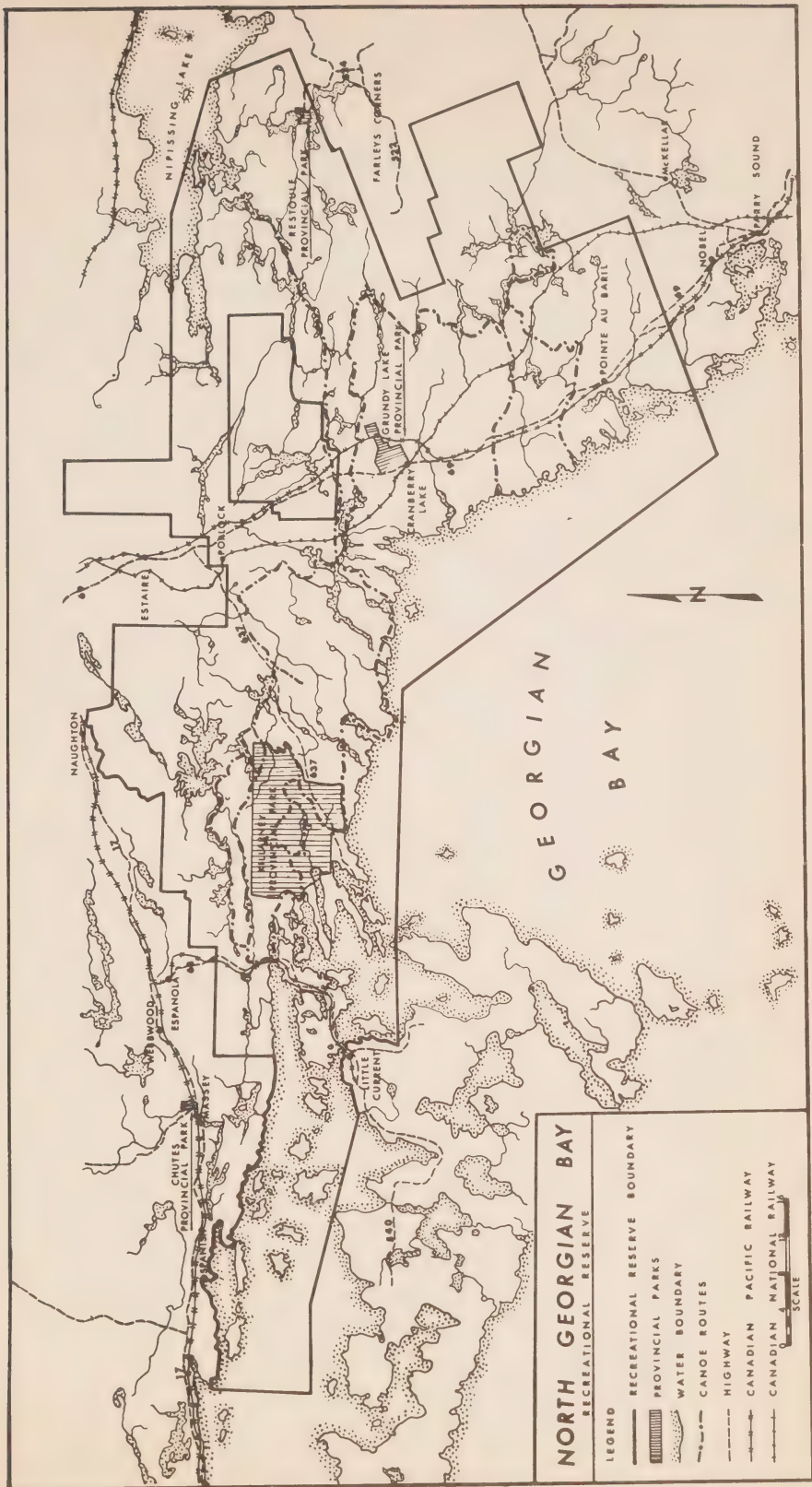
It is a matter of opinion where the line should be drawn between different compatible uses, e.g. lumbering and recreation. For example the Ontario Federation of Hunters and Anglers, in a recent brief to the Minister of Lands and Forests, has criticized what it considers to be the undue indulgence shown to the lumbering inter-

ests in Algonquin Park, particularly in "the construction of a maze of (logging) roads within the Park boundaries." These roads were built subject to certain restrictions and with the permission of the Department. But "unfortunately the restrictions have not always been applied, and the roads have been built in some cases without permission . . . There is an increased public awareness of the fact that the Park is being used by a large number of individuals in other than the way that it was intended to be used . . . A new general policy with respect to lumbering within the Park boundaries should be established at once. This policy should clearly state that the prime use of the Park is recreational and that lumbering is secondary and is carried out under sufferance. As part of establishing a uniform policy of administration of the various timber leases, all of the present leases should be cancelled and replaced with short-term leases that expire at the same time."⁵³

In many of the timber licences issued, specific reservations against cutting of trees are made to preserve lake shorelines, portages, canoe routes and roadsides. Generally, however, the local district forester, who has great familiarity with prevailing conditions, has full authority to reserve areas from logging in the interest of other uses, e.g. recreation. In actual practice such reservations are in force today in both Algonquin and Quetico Parks. The chief conflicts arise when the users of Park facilities for canoeing, boating, camping and fishing encounter conditions which are necessary to effective modern logging practices, such as logging access roads, sound of chain saws, etc. In a number of instances the Department has not yet found a solution to these contradictions.*

In 1962 the Government of Ontario began to experiment with a new type of "recreation reserve" which would be much larger and more elastic than a park as usually defined and would allow for the development of multiple land-use in terms of recreation. Such a reserve would be "strategically located in relation to centres of dense population" and would possess "great potential for year-round educational use." The first area to be so designated was Killarney Recreation Reserve, on the north shore of Georgian Bay.

*In regard to the multiple use of land, everyone is apt to think that "his fleas are the biggest"; and the only solution is to find some authority that can serve as an arbiter between rival users of a natural resource. For water, the best known source of authority in Ontario is the Lakes and Rivers Improvement Act (R.S.O., 1960, c.203); a consolidated version of legislation which has been used for a century to define rights and privileges of different users of water.



NORTH GEORGIAN BAY RECREATIONAL RESERVE

- LEGEND**
- RECREATIONAL RESERVE BOUNDARY
 - PROVINCIAL PARKS
 - WATER BOUNDARY
 - CANOE ROUTES
 - HIGHWAY
 - CANADIAN PACIFIC RAILWAY
 - CANADIAN NATIONAL RAILWAY
- SCALE 0 5 10

The Killarney Act placed the reserve under the Minister of Lands and Forests and instructed him to formulate and implement a land-use plan for the development of the area.⁵⁴ Before long, however, the Government began to enlarge its conception of the scope of the experiment. In 1964 it engaged a town planner, Professor Norman A. Pearson of the University of Waterloo, to plan a greatly expanded regional version of the Reserve, under the title North Georgian Bay Recreational Reserve. This Reserve, according to Professor Pearson, is to encompass some four thousand five hundred square miles of territory ("some of the most interesting and little-known country in Ontario") lying between Parry Sound and Algoma. The aim of the place would be to provide, in Professor Pearson's words, "a large playground of human activity where all classes can seek the complex patterns of recreation in a region where public land is managed, towns evolve and resources are used with year-round recreation as its prime purpose."⁵⁵

The basic idea of the new recreational reserve is to push ahead of present demand and search out an area which, within the next few decades, will be extensively used. The new concept bridges the gap between the clearly defined park area and urban fringe areas. It recognizes that recreation is universal and not just confined to the urban milieu or the state park.

"The legislation," explains Professor Pearson, "places emphasis on the year-round recreational use of the Reserve. Therein lies the full excitement and challenge of the area. The region is already used for active recreation . . . The promise of the future is that by guiding the evolution of the area the full potential for recreation can be realized, in harmony with a full use of the resources which are developed in the normal economy of such a region . . . By a judicious distribution of park areas, service and picnic facilities and points of interest and activity, we can ensure that the gradual build-up of pressures is evenly distributed and that private facilities can plan ahead for their investment to supplement the range of interest available. By adopting carefully thought-out controls we can prevent the deterioration of the landscape. But surely we can do more . . . Surely we have a duty to treat a whole region as a living museum, a way of explaining some of the mysteries of geological evolution—some of the fascination the ecologist feels in describing the way landscapes develop. Surely the forester has a

duty to show the people the devices by which yield is maintained, how wild life is supported, how the different practices of selective cutting and tree-farming are carried on . . . This is the full enjoyment of an environment; and in time it will be the only answer to the pressures of a mass society . . . Recreation is not just icing on the cake – it is the measure of civilization.”

Thus the original concept of conservation formulated by Alexander Kirkwood in his plan for Algonquin Park over eighty years ago, has taken on new life and meaning in today’s multiple land-use planning.

THE WORK OF RESEARCH



Research is nowadays a basic requisite for success in the management of natural resources. This was recognized by the first foresters, Clark and Zavitz, when they joined the Department of Lands and Forests early in the century, and began to build up a tradition of research activity in connection with their work. But so far as forestry is concerned, the Government of Ontario first formally recognized this in 1927 when, under the Forest Act of that year,¹ it appointed a Forestry Board to carry out "research work in connection with the forest lands of the Province."² The new Board acted quickly and by 1929 had set up a research unit in the Forestry Branch of the Department under J. A. Brodie, consisting of five foresters and some twenty-seven students, to operate in the districts

of Sault Ste. Marie, North Bay and Sudbury. Its initial task was to test the truth of the commonly-held belief that the most desirable species of forest trees, spruce and pine, did not regenerate adequately after logging, and only rarely after fire when it occurred in a cut-over area. Following this, the unit was asked to try to find out what factors were necessary for satisfactory regeneration of these species and how they could be secured before, during or after a logging operation, at a reasonable cost.

The first phase of the programme was practically completed by 1931, when exhaustion of funds severely curtailed the work. The second phase continued in halting fashion in the districts referred to, and in Algonquin Park; but in 1935 the whole research effort was abandoned and most of the staff dismissed.

When the Department of Lands and Forests was under reorganization in 1941, a new Research Division was established under a part-time chief, to carry on work in forestry problems. After three years of more or less nominal activity, this Division became fully operative with R. N. Johnston as chief, under a directive issued by the Deputy Minister which in effect defined its authority and functions as follows:

- (1) assessing the research needs of the whole Department.
- (2) co-operating with existing research agencies (e.g. federal) to meet these needs.
- (3) undertaking independent research in fields not covered by such co-operation.

In spite of the small size of its staff (seven) and budget (fifty thousand dollars), the new Division was able to carry out a major experiment in the use of aircraft to spray insecticides on forest areas – the first of its kind in Canada and a pattern for similar work in the United States. It also revived forest regeneration survey work (discontinued in the early 1930's), which laid the foundation for subsequent research in this field and served as a means of recruiting a young and competent staff to carry it on. Further, it formulated a system of forest soil classification which has since received international recognition and has had a considerable influence on provincial lands policy and administration.

By 1946, the Division had established its headquarters at Maple, Ontario (the southern research station), where it was equipped with a mechanical workshop, office, laboratory space and other

research facilities. Then, in the same year, the Department of Game and Fisheries was amalgamated with the Department of Lands and Forests.³ This greatly broadened the scope of the research activities. Already some fisheries research had been undertaken by Dr. Harkness, Dr. Fry and Dr. Langford at the University of Toronto, and some wildlife research by Dr. C. H. D. Clarke in the Provincial Parks. With the expansion of staff and services brought about by the amalgamation, the Division as a whole was subdivided into four main operating sections; forestry, fisheries, wildlife and mechanics.⁴ The functions of the first three of these may be defined generally as determining the fundamental facts on which natural resources management should be based, the methods to be used for the production and maintenance of these resources, and the yields to be expected in quantity and quality from specific treatments. The fourth, however, the mechanical section, was organized not only for the purpose of carrying out research of its own, but also to provide specific mechanical services required by the biological research programme of the other three sections. In this capacity, the mechanical section has designed and constructed instruments, tools and machines without which important research projects would have been vitiated by delay or abandoned as impractical.⁵

Later, the Division became more and more involved in cooperative research arrangements with the federal Government, universities, the Ontario Research Foundation and private industry.

By the middle of the 1950's, the Division – or Branch as it was shortly afterwards renamed – was well on its way to its present-sized staff of one hundred and ten and its present budget of some one million dollars annually. During recent years its growth has been less spectacular than formerly. However, the Branch's field organization has steadily expanded and now includes units at Port Arthur, Cochrane, Sault Ste. Marie, Dorset (near Huntsville), Tweed and Maple. There are also fisheries research stations on Lakes Huron, Erie, Ontario and Opeongo, as well as a wildlife station in Algonquin Park. Field research is an essential and closely integrated part of the whole Research Branch programme. All descriptions of Branch research are, therefore, to some degree descriptions of field and field station research.

For a time a physics section was in operation on a trial basis. Its work helped to lay the foundations of a very important organiza-

tion, the Great Lakes Institute, which is maintained today by the University of Toronto, with the support of the Research Branch.

It is difficult to summarize effectively the diversified and complex programme now undertaken by the Branch. However, a fair idea of what is being done can be gained by taking samples of its current projects in the three fields of forestry, fish and wildlife and outlining their aims and achievements. Each of these three fields as its own distinctive character. In forestry research, for example, the main characteristic is the factor of time. Although Christmas trees and other nursery stock can be grown in a short time, trees on the whole – both as individuals and as communities (forests) – are long-lived and develop slowly. Both in management and in research, foresters generally spend much of their active career in establishing forest conditions whose ultimate development they will never see. Even their most advanced studies (such as in yellow birch regeneration) cannot be fully verified until they have resulted in a harvest of good quality lumber – which is a matter of almost a hundred years.

FORESTRY. One of the first pieces of forest research to be undertaken by the Department of Lands and Forests dealt with the famous white pine that was once the mainstay of the Ontario timber industry in the nineteenth century. Since 1906 the supply of this tree has seriously declined and today it forms a small but still important part of the total volume of wood cut in the Province.

Many of the areas that originally supported our best pine are identified as the limestone soils of southern Ontario, and much of this land is now occupied by farms. However, to the north of these areas the pine grew well on soils that are not particularly suited to farming; and it is in these areas that every effort is being made to retain or increase the proportion of white pine in the forest. It is a tree that occurs in mixture with broad-leaved trees such as sugar maple or, as commonly observed in the Ottawa Valley, with other pines.

Research surveys were conducted from 1930 to 1945 to determine the effects of logging upon pine reproduction. It was learned that the pine seedlings in the mixed-wood forest were killed by the competition of the lush growth of broad-leaved species that quickly took over the area after the logging of the pine. To reduce this competition, controlled fires were tried; and more recently a variety of



Spraying wild currant bushes with herbicide



White pine badly affected by blister-rust, 1954

chemicals have been tested by research for the same purpose. This work has provided the required information as to types of chemicals, strengths and volumes, and particularly the best times for spraying to kill the underbrush without harming the young pine seedlings. The knowledge is being used in the present-day management practices of the Department.

In addition to this work, the early research surveys, which started in 1917, reported the presence of a very serious disease of white pine. This disease, known as white pine blister rust, threatens the very existence of the pine by damaging the older trees and killing the seedlings. The disease requires an alternate host (such as currant bushes) to continue its own life cycle. The risk of infection is greatest where the relative humidity of the normal climate is high. The continuing study of the spread and seriousness of blister rust has enabled the Department to delineate those areas where white pine may be planted with some degree of assurance that rust will not be an immediate problem.

In 1946 the Research Branch initiated a programme to develop, by tree breeding, a white pine that would be resistant to this disease. By 1954 techniques for the artificial inoculation of the pine with rust had been developed, and a collection had been made of native and exotic pines that appeared to be naturally rust-resistant. These rust-resistant trees were cross-pollinated and their progeny tested by exposure to the disease. Those that exhibited a high degree of resistance were retained and now constitute a source of scions that are suitable for the establishment of a seed orchard that will produce seed for growing a rust-resistant white pine.

Another problem of regeneration has arisen in connection with the yellow birch tree,⁷ which is now one of the most important of our remaining commercial hardwood species. In mixture with sugar maple, this tree grows best on the southern edges of the Pre-Cambrian Shield—other than the north shore of Lake Superior. Unlike maple, however, its quality is not seriously affected by Shield soils nor is it as prone to frost damage. In range, growth habit, size and wood quality, yellow birch is *the* outstanding broad-leaved tree of the hardwood forest on the Shield. Unfortunately, normal logging practices have almost eliminated its regeneration. Over the past fifteen years the Research Branch has tried to develop effective management practices which will lead to the re-establish-

ment of this species after logging. Certain salient points have emerged from these studies.

Yellow birch is a prolific seeder and its seed germinates well, but the seedlings cannot survive on the thick leaf-litter that is deposited on the forest floor each autumn. The birch seedling roots are unable to penetrate the thick mat of leaves during the following spring and so reach the moist soil beneath; most of the seedlings therefore die of drought during the summer. Those that survive the first season do not grow well enough to withstand the next autumn's fall of leaves, and are smothered. Seedlings found on decayed logs or stumps where the leaves do not collect may survive for several years.

Birch seedlings can outgrow their hard maple competitors only if they get increased sunlight and enough soil moisture. Management practices must therefore include the provision of a suitable seedbed and an open crown cover. If these requirements can be effectively met, the yellow birch can be maintained and multiplied as required. Through cutting experiments designed to provide the optimum light conditions, including such procedures as machine scarification and prescribed burning, the Research Branch has discovered the best methods of opening up the forest. During this research, it also learned that birch seedlings were a preferred food for deer, and that repeated browsing could seriously affect the seedling survival. However, where normal hunting pressures are exerted, as in most of the Province, the presence of deer is compatible with the growing of birch. The knowledge gained from research on yellow birch has been used in the timber management programme of the Province of Ontario for the past ten years.

Another important piece of practical forestry research is the growing of seedling trees in tubes.⁸ No one can predict when forest fires are going to occur; consequently, it is impossible to plan beforehand for an adequate stock of nursery-grown seedlings, which require two or three years to grow before planting. By the time such seedlings are ready, the competition of unwanted new vegetation on the burned-over area lowers the chances of planting success. To meet the sudden demand for "instant trees", the Research Branch has been experimenting since 1957 with the growing of trees in small tubes which can be planted in the same season as fire occurs. Tubed seedlings have the advantage over nursery stock, that they can be planted in mid-summer instead of only in the spring and fall. Also,



Tubed seedlings



Transplanting machine

they can be planted on rocky terrain, where the planting of larger nursery stock is extremely difficult. The new technique, however, was at first intended only to supplement, rather than supplant, conventional planting methods.

After many small trials and various mechanical innovations, by 1963 the Branch was ready to produce tubed seedlings in large quantities, and had devised a technique for planting them. What are these 'tubes', and how are trees produced? First, tree seeds are germinated under suitable conditions in soil in open-ended plastic tubes, each about twice the diameter of a standard cigarette, but slightly longer. A split down one side of the tube allows the seedling to grow beyond the tube. The tube is two-thirds filled with soil, to prevent moisture loss from sun and wind. When the seedling has developed good top growth and the roots have extended to the bottom of the tube, but not beyond it, the seedling is ready for field planting. The tube containing the seedling is planted with a specially designed stick with which the planter makes a hole in the ground, then inserts the tube without having to bend down.

The next task was to devise mass-production and mass-planting methods for practical use. The devices employed included a machine for loading 200 tubes with a prescribed amount of soil and placing them in even rows in flats, a device for introducing one seed into each tube and a machine to provide a sand cover over each seed. The seeds are germinated in a tent-like greenhouse of plastic sheets, and are ready for planting out five or six weeks later. Racks containing six flats (1200 tubes) are carried into the field to supply the planters. As an indication of planting speed by this method, one man can plant an average of three hundred tubed seedlings per hour, whereas even in good terrain, a man is doing well if he plants six to eight hundred nursery-grown seedlings in an eight-hour day. By the new method, planting can start six weeks after the demand for stock. Handling and transportation are both greatly simplified. For example, the operation does not have to be carried out in close proximity to a power source, as everything is done manually (with the aid only of a small portable generator for operating a vacuum seed-plate). The Department has made the planting of tubed seedlings an integral part of its programme, commencing in 1966. The 1966 tubed seedling planting programme was for approximately twenty-six million trees on twenty-four thousand acres in the

sixteen northern districts – mostly white and black spruce and red pine, with smaller numbers of white and jack pine.

A fourth forestry research project of great importance is the study of black spruce. For many years northern conifers – black spruce in particular – have been the chief source of a wood pulp best suited to current methods of manufacturing wood fibre products. As Ontario possesses one of the largest spruce forests in the western world, the Province has long enjoyed the economic benefits of a prosperous and expanding wood fibre industry. Today, however, Ontario's northern conifers are being successfully challenged by southern conifers, mainly pines in the southeastern United States. This development is largely due to the discovery of better methods of wood-fibre processing, based on persistent and aggressive wood-technology research. For the time being spruce is still the superior raw material for many end-products. But there is no reason why southern-pine-based products should not continue to improve, with many adverse effects on Ontario's economy as a whole.

The Research Branch has for some time past conducted a silvicultural programme on the commercially important tree species of Ontario; and this includes a somewhat limited research on spruce. The spruce studies have indicated, but not yet proved, several important facts. In many areas occupied by spruce, logging practices in the past have produced swampy conditions and accelerated growth of sphagnum moss, which is unfavourable for spruce reproduction. Spruce grows best on well-drained soils. The area of existing spruce forests in the Cochrane Clay Belt could be doubled in size if excess water could be drained.⁹ Experimental tests by the Research Branch of muskeg drainage by explosive and machine ditching have not been encouraging, although reports from the Finnish Forest Service have indicated excellent results from various types of drainage. These findings by themselves do not provide a basis for improved management practices; but they do reveal the dimensions of the problem and the direction which future research should take.

Commencing in 1962, a cooperative programme on "Quality Wood" between the Research Branch and the Ontario Research Foundation was initiated,¹⁰ to investigate the physical and chemical properties of wood so that forestry measures could be developed to produce the most desirable characteristics in the standing tree. The first species chosen for study was black spruce. Since 1962 the

Research Branch has selected the raw materials for study and has conducted investigations of wood density variations, while the Ontario Research Foundation* has prepared and evaluated the laboratory tests on selected wood samples. One of the projects has shown that if the amount of compression wood** does not exceed 10%, the wood can be pulped quite adequately by the same cooking conditions as are used for normal wood; although the yield of pulp would be reduced, pulp strength properties are likely to be unaffected.

The wood technology part of the programme helps us to determine the physical and chemical characteristics which constitute superior wood pulp. This will make it possible to direct silvicultural research (including tree breeding) toward the production of a better quality northern spruce.

In addition to these projects, several other important undertakings in forest research have been launched. Since 1948, six permanent research units have been established in the six regions mentioned earlier in this chapter. The research workers in these units are studying the requirements of the important tree species of each region.

In northwestern Ontario, research surveys dating from 1945 have yielded valuable information. The white spruce, which is the most important tree in these forests, is being depleted by logging and is being replaced by balsam fir, poplar and white birch. Experimental cuttings are providing valuable information that will assist in the re-establishment of the white spruce.¹¹

Research in central and south-central Ontario has been concentrated on improving the quality of hard maple¹² and on the silvics of red spruce,^{12a} two of the important species of that region. Research into various aspects of nursery planting practices and woodlot management (silver maple, basswood) has been underway from 1945 to 65.¹³ The nursery work includes such matters as pruning, under-planting, soil acidity, control of frost-heaving, use of fertilizers, planting check in spruces, and the comparison of seedling and transplant stock. In 1958 a programme of prescribed burning was undertaken by the Branch to explore the usefulness of controlled fires as a means of reducing the competition of brush with

*The O.R.F. is conducting its part of the programme under contract with the Department, and financed by the Department.

**A special type of wood tissue produced by the tree in resistance to local pressures, e.g. from wind.

tree seedlings, and to prepare a suitable seedbed where required.¹⁴

Researchers have also tried to answer the question: how can we make the best use of Ontario land, i.e. for farm crops, forest and wildlife crops, and recreational purposes? A team of site specialists, now numbering ten, has developed a site classification system of practical use in this Province.¹⁵ This is broadly based on a combination of climatic and soil variations, with (more recently) greater emphasis on studies of moisture, temperature and nutrient factors. The ultimate aim is to provide land ratings for optimum production.

Tree-breeding has been the subject of much attention. It includes, besides the white pine project referred to previously, breeding projects for aspen poplars,¹⁶ red pine¹⁷ and spruces. The poplar programme aims to produce a high-quality, fast-growing poplar suitable for growing in southern Ontario. The red pine programme seeks principally to produce hybrids resistant to the pine-shoot moth; and the recently-started project on spruces seeks to define differences in the several species, to facilitate selection of the best for reforestation purposes.

Other activities in forestry research include mensuration¹⁸ (the science of tree measurement), which started in 1947 and has been mainly concerned with the preparation of volume tables (record of average wood content of trees by size-classes); and two very recent projects, one on forest economics and the other on intensive computer study.

FISHERIES. Before the 1946 merger with Game and Fisheries, the Department of Lands and Forests supported fisheries research through subsidized university studies. Most of this work was intermittent and on a short-term basis. In 1937, however, a permanent field laboratory was erected on Lake Opeongo in Algonquin Park; and after the merger this laboratory became a major centre for seasonal field studies and for contacts between departmental and university fisheries research staff.

In 1947 a research station devoted to the study of the fisheries in Lake Huron was established at South Bay, Manitoulin Island. Later, similar research centres were developed on Lake Erie (1953) and Lake Ontario (1957). At these centres experimental netting, creel censuses and other investigations are carried out to determine the survival, rates of growth and fluctuations in numbers of com-

mercial, game and other fish; and attempts are made to relate these factors to environmental conditions.

To study the physical and chemical aspects of the environment, a programme of limnological and meteorological research was evolved in the former Physics Section of the Research Branch.¹⁹ This programme became involved in an increasing number of fundamental studies which did not bear directly on fisheries, and it became apparent that it needed broader support. Consequently, an agreement was reached whereby the work was taken over by the University of Toronto as a basis for a Great Lakes Institute. In July, 1959, the research vessel *Porte Dauphine*, which had been on loan to the Research Branch from the Royal Canadian Navy, was transferred to the University, which carried on the programme on an informal basis throughout the rest of that year. In the spring of 1960 the Great Lakes Institute was formally established by the Senate of the University. It has continued to function since that time with the cooperation and financial support of Ontario and Dominion government agencies and grants from various research foundations. Limnological research with more direct bearing on fisheries is now the responsibility of a unit within the Research Branch. By 1964, the staff of the Fisheries Section of the Research Branch had increased to thirty-five, thirteen of whom were trained biologists, who had the help of twenty-six students for summer field work.

One of the best-known pieces of fisheries research is the effort to control or eradicate the depredations of the sea-lamprey in the Great Lakes.²⁰ This research is part of a joint study and campaign conducted by Canadian and U.S. governmental agencies.* The sea-lamprey is an eel-like creature up to thirty inches in length which possesses a circular mouth equipped with sharp cutting teeth. These enable it, when it has attached itself to the side of a fish, to rasp through the scales and suck the blood. Its chief prey is the lake trout, though it also attacks whitefish as well as less valuable species, such as suckers and chub. The lake trout is one of the main commercial fish caught in Lakes Huron and Superior. It lives in the cold waters of the deepest parts of these lakes and develops slowly, not attaining spawning size until the age of seven. In the late 1940's, after it had been noticed that the lake trout catch was

*Under the authority of an Act to implement a Convention on Great Lakes Fisheries between Canada and the U.S., assented to on June 28, 1955.



Close-up of sea-lamprey



The new hybrid trout, the splake

declining severely, research showed that this was due to lamprey predation. The lamprey attacked the trout before they reached maturity and began to spawn; hence the fish failed to reproduce.

Two research approaches have been made to controlling the sea-lamprey: electric barriers to prevent adults from reaching their upstream spawning grounds, and poison to kill the larvae. Electric barriers were installed at the mouths of tributary streams where the lamprey were accustomed to spawn. But trials showed that these barriers, though fairly effective, were subject to mechanical failure. A second line of attack was therefore initiated. The researchers concentrated on finding a suitable poison that would be cheap, easy to apply in the correct concentration and highly effective against the lamprey, without harming lake trout, other fish and aquatic life. The poison used recently is known as TFM (3-trifluor methyl - 4 - nitrophenol).

The programme for the chemical control of the lamprey was begun on Lake Superior, with a view to saving the remnant of the lake trout population there. So far effort has been concentrated mainly on that body of water, except for some work done on Lake Michigan by U.S. agencies and some preliminary experiments and surveys carried out in Georgian Bay and Lake Huron by the Fisheries Research Board of Canada. The Research Branch has played a minor role in assessing the effectiveness of sea-lamprey control measures. It has obtained information by canvassing commercial fishermen with a monthly questionnaire to determine the extent of lamprey scarring. It has kept the fishermen posted on results and developments. During the winter of 1961-62 the lamprey population of Lake Superior was reduced to about three-quarters of its former size, presumably as a result of the controls. However, since that time the numbers have remained fairly constant.*

If the use of selective poison fails, the researchers have still another card to play. This is the breeding of a new hybrid fish which could take the place of the lake trout and be resistant to lamprey infestation. The Research Branch has, therefore, concentrated its efforts on producing a cross between the speckled (brook) trout and the lake trout.²¹ This hybrid has a swim bladder similar to that of the lake trout, which enables it to swim deep and thus

*The Fish and Wildlife Branch is currently engaged in a large lake trout restocking program in Lake Superior.

re-occupy Great Lakes waters formerly inhabited by the lake trout. It has also the early maturing characteristics of the speckled trout, and therefore will spawn in its second or third year. Thus the spawning will occur before the sea-lamprey, which usually preys on larger fish, is likely to attack it.

The project has now been under way for some eight years and has achieved, so far, gratifying results. Fertile, deep-swimming hybrids selected from thousands of original crossings have been produced and are being further crossed (back-crossed) with the parent stock to accentuate desirable characteristics. Small plantings of the new hybrid – named the splake – have been released in Lake Huron. The splake is a fine fish in its own right; it grows rapidly, matures early, and is a good fighter, likely to be popular with both sportsmen and commercial fishermen. But however promising the results of this hybridization may be, it is too early yet to claim complete success, which can be achieved only when a significant population of catchable hybrids has been established.

Another piece of research of great importance as a guide to sound management of provincial fisheries is the making of an assessment of the capacity of provincial waters to produce larger stocks of fish.²² To make such inventories practicable, a simple but reliable procedure, related directly to water productivity, must be devised. During the last few years, the Fisheries Section has operated a small unit which has been making significant progress towards solving this problem. This unit concerned with lake productivity has demonstrated a close relation between the chemical fertility of many Ontario lakes and their fish production, in pounds per acre per year. Chemical fertility is measured in terms of the total dissolved solids and alkalinity of a lake and is comparatively easy and inexpensive to measure. Consequently this work should provide management with a convenient means of estimating the productive capacity of all waters. Further, it has demonstrated the relation between the productivity of many Ontario lakes and the glacial history of their watersheds.

Besides these three samples of fisheries research, there are many others that may be cited as currently in operation. The first concerns the Great Lakes Fisheries. By federal-provincial agreement the Fisheries Research Board of Canada is responsible for all general research on Lake Superior and for the sea-lamprey experiment.

The Research Branch of the Ontario Department of Lands and Forests is responsible for general research in Lakes Huron, Erie and Ontario. From year to year marked changes occur in the abundance of whitefish,²³ walleye, lake trout,²⁴ bass and smelt²⁵ in these waters. Research shows that these changes reflect the varying success of the survival of these different species in different years. Several projects are now being carried out to determine the factors which influence reproduction and cause these fluctuations; these have special reference to the first year of life of the fish, during which the size of the 'year-class' (as it is termed) is believed to be established. An understanding of these factors may help to eliminate the fluctuations in abundance of commercial and sport fish.

Research into game fish generally (apart from lake trout, which began in 1948 in the smaller waters) is recent. Speckled trout²⁶ and small-mouthed bass²⁷ research has developed only since 1960, and walleye research²⁸ only since 1962. Of the many problems investigated, brief mention can be made of one project selected for each of these fish: a lake trout project to test the relation between survival of planted stock and water hardness; a programme on the survival of planted speckled trout in the presence of other fish such as suckers; an assessment of the contribution of hatchery-reared small-mouth bass fingerlings; and the effect of all environmental factors on the walleye. To supplement the information gained from netting and creel census, with direct observations of the fish in their natural state, several of the staff have taken training and are now actively engaged in scuba diving at study sites. Another fisheries research programme (1960) is concerned with parasites as they affect the main species of fish.

WILDLIFE. The Department of Lands and Forests commenced wildlife research in 1947 with the object of improving general resource management practices on Crown lands after the merger with the Game and Fisheries Department in 1946. Earlier than this, however, limited research was carried on in Algonquin Park while F. A. MacDougall was superintendent. This research included a census of beaver houses (1939-40), a study of moose distribution (1941) and a report on the birds of the Park (1938-39).²⁹ In 1945, shortly before the merger, the Department established the present Wildlife Research Station. This station has ever since continued to

provide essential field facilities for some of the wildlife research work.

In common with all other phases of the Research Branch's programme, wildlife studies have multiplied and become more complex as time passes. The following examples, picked out from many such studies, will give some idea of the type of work undertaken.

Ever since prehistoric times, the white-tailed deer has been an important wildlife resource in Ontario. The debris from Indian middens (refuse heaps) around 1000 A.D. indicates that venison must have been their staple food. In later times it continued to be so for the early white settlers. In a few parts of the Province venison is still an important part of the food supply of some natives; but over most of the Province deer are now valued primarily as game animals. Within the historic period, deer have undergone considerable changes in numbers and distribution. Originally, they abounded in south-western Ontario and along the shores of Lake Ontario and the St. Lawrence River. Gradually their numbers declined during the second half of the nineteenth century, partly because of extensive settlement which led to the destruction of their natural habitat, and partly because of hunting. However, during the same period, the deer were spreading northward into central and western Ontario. This was partly because of habitat changes as a result of agricultural and forestry practices, and partly perhaps because of climatic changes. By the third decade of the twentieth century they had extended their range more than three hundred miles north of the C.P.R. and C.N.R. transcontinental railway lines. At the same time their numbers began to increase in their original Lake Erie and Lake Ontario ranges as a result of rural development, reforestation, woodlot care and more efficient law enforcement.

After reaching a peak in the period 1900-1925, the deer declined drastically in northern and much of central Ontario; but in southern Ontario the population was maintained and perhaps increased. It remained stable, or if anything, increased sufficiently to allow hunting in the more southerly parts of western Ontario (west of Lake Superior) as well as in central and southern Ontario, roughly south of a line from Batchawana Bay to Lake Timagami.

These remarkable fluctuations in the distribution of white-tailed deer have been referred to in the preceding chapter of this book. Research indicates that the main factors affecting the management

of deer are geographical and climatic. The northern limit of deer range passes across Ontario; and north of this limit the deer are ill-equipped by nature for survival. There may be other environmental factors yet to be discovered, but the most harmful are the long-continued low temperatures, the strong chilling winds and the deep snows of the northern winters. Research in Algonquin Park has shown that a depth of snow above twenty inches greatly restricts the movements of the deer.³⁰ Under conditions of deep snow in areas where food and shelter are inadequate, deer die in large numbers, mainly from starvation. A high proportion of those which do survive emerge badly emaciated; and the does are frequently unable to nourish their fawns. If one severe winter is followed by a succession of bad seasons, the overall capacity of the deer to reproduce themselves is greatly impaired.

Obviously the weather cannot be changed; therefore research into weather factors does not directly promote the survival of Ontario deer. Nevertheless, the annual collection of data regarding snow depths, temperature and wind velocity enables us to predict more accurately than in the past the probable mortality of the Algonquin Park deer herd; also the fluctuation of the deer population in general and the availability of deer to human hunters. Research also shows us what we can do to alleviate the effects of bad weather by providing deer with improved food and shelter. In the old days of "bigger and better fires", as Zavitz would say, there was much better deer browse over the range occupied by deer in Ontario. Improved fire protection changed this. During the days of intensive logging, brush conditions were created that provided ideal food supplies for deer. Unfortunately cover – principally conifers – was removed, and forests have resulted which no longer provide food and shelter to maintain the large deer herds of half a century ago. Today, however, studies of deer-ranging habits are bringing about improved practices in many parts of central Ontario. These include clear-cutting of strips to open up the forest canopy and allow shrubs and other deer foods to grow. Also, more conifers are being planted to ensure that deer will have winter shelter. It is still too early to assess the long-term effects of these measures in southern Ontario. As long as severe cold and deep snow conditions continue in northern Ontario the population problem will persist.

Algonquin Park has been the scene of an important study of

wolves, designed to provide information about their ecology and life history, and especially to determine whether the bounty system is or is not effective in controlling wolf populations.³¹ When this study started in 1958, bounty-hunting by the Park Ranger staff was abandoned. For the first time in sixty-three years, the Park wolves were then left free to live under virtually natural conditions. No-one knew, of course, how they would respond to this favourable change in their environment, but it was supposed that the population would increase.

Although there had never been any official study of the wolf population in the Park, years of park ranger bounty-hunting prior to 1958 had led to a general belief that the population had been stabilized at about two hundred and fifty to three hundred animals. One of the strongest pieces of evidence supporting this belief was contained in the bounty records which, over the full period of the bounty payments, showed an average annual kill of about fifty animals. This stability was not peculiar to Algonquin Park. Records for the whole Province showed a similar consistency, despite weather variations and widely-changing rural economic conditions. In explanation of this circumstance, therefore, it was assumed that bounty-killing, both in the Park and throughout the Province neatly balanced the natural increase of the wolves. Cessation of the bounty might result in a rising wolf population.

In the seven years of the wolf study, special attention has been focussed on this assumption. Not only was the whole Park area kept under close surveillance, but a concentrated examination was made of an area of twelve hundred square miles covering eleven townships. The researchers spent hundreds of hours in aerial observation of the wolves, and travelled hundreds of miles on the ground for the same purpose. They examined scores of wolf kills and several wolf dens, developed a technique of calling wolves by tape recorder, captured and raised several wolf pups to study their characteristics, and tamed a number of adult wolves for the same purpose.

From all this it now seems evident that, contrary to expectation, there is no evidence that the suspension of bounty-killing has produced any increase in the total wolf population, or in the size and number of wolf packs. Nor is there any reason to suppose that an Algonquin Park surplus of wolves has spilled over into adjacent territory. There *is* evidence, however, that the Algonquin Park

wolves have responded to the absence of the bounty. Some eighty animals showed a very unusual age structure: on the average, these Park wolves were much older than those in other areas where they have been continually hunted. An almost complete absence of year-old animals showed that there must have been some failure to reproduce, or that the young animals did not survive. The Park has a surplus of deer and beaver, both of which are favourite wolf-prey, and therefore food supply offers no barrier to their expansion. The Algonquin Park studies, therefore, strongly suggest that wolf populations are self-controlling. They can be eliminated locally, either by intensive control efforts or by drastic changes in the environment; but casual bounty or other killing has no overall effect on the existing wolf population.

In animal ecology, a major problem is presented by the fact that animals move about and that their movements must not be controlled if we wish to learn anything about them in their natural state. Large terrestrial animals wander over great distances, changing their habitat and behaviour according to the seasons. Until recently, the only means of getting information about birds and mammals in their natural state was by direct observation or capture, marking and subsequent re-capture (or killing). A breakthrough in research into animal ecology has come with the development of the radio transmitter tag (R.T.T.).³²

In 1957 the Research Branch hired a student from the Ontario Agricultural College to develop an R.T.T. Four years later technicians at the University of Minnesota developed a circuit and specialized components that produced a lighter and more reliable R.T.T., which, in 1962, was further improved by the Research Branch. This new type of R.T.T. comprised a transmitter weighing about one gram (about the same size as a discarded cigar butt) and mercury batteries to supply it with power which can be varied according to the size of the animal to which it is attached. The total weight of the transmitter and collar varies from three ounces for a fox to twenty ounces for a caribou. The transmitter is attached to a brass band which acts both as an antenna and as a collar for fastening on the animal. Each R.T.T. has its own pulse rate; tagged animals are individually identified by the number of "beeps" per minute. Ranges on the ground are limited to about two miles; but with aircraft a range of five miles can be achieved. Increasing the

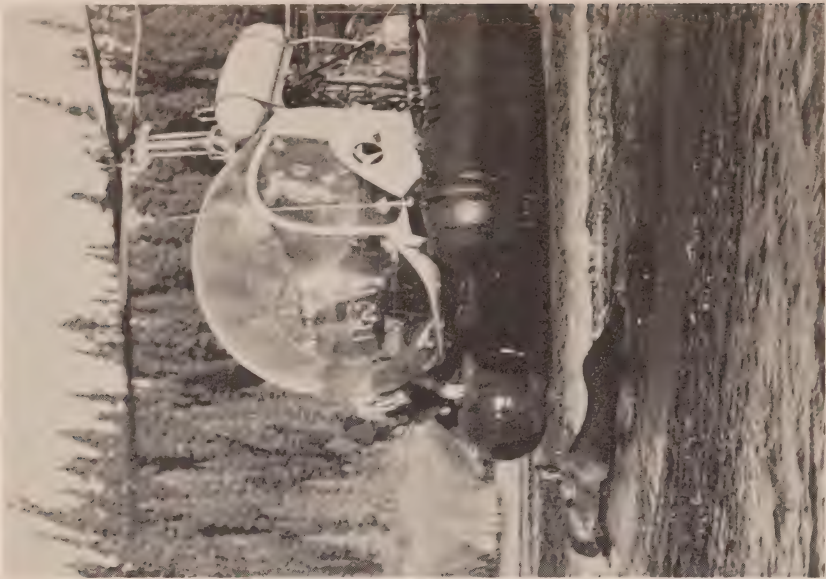
power of the transmitter lengthens its range, but decreases its effective life. The best so far achieved, with a caribou or moose, is a range of six miles and a life of one-and-a-half to two years. Each transmitter costs about thirty-five dollars to assemble.

These R.T.T.'s were first used for research on rabies in red foxes, to trace the movements of the animals and find out the limits of their range and contacts with other animals. R.T.T.'s are also being used for research on timber wolves, and will soon be used on deer, moose, caribou, black and polar bears, etc. Experiments are now underway to test the use of silicon solar cells to power the transmitters. These solar cells are similar to the types used on satellites, and will enable the transmitter to function indefinitely, and so keep track of an animal for several years, perhaps even for its whole lifetime.

In the summer of 1958 a technique was developed whereby moose can be tagged by being marked with metal livestock ear-tags. This technique involves manoeuvring the moose by means of a hovering helicopter into water deep enough for the moose to swim, and then straddling it with the helicopter, at which time a tag can be applied manually. On an average five moose can be tagged per hour of flying under good conditions. Over 250 moose have been tagged in this manner since 1958, mainly in the western and mid-western regions of the province. Subsequent recovery of these tagged animals by hunters gives information on their movements.

Other important wildlife research programmes include studies of moose³³ and woodland caribou,³⁴ furbearers, diseases and parasites, and upland game and waterfowl. Moose studies are concerned with their population and movements as they affect productivity for hunting; woodland caribou studies with the determination of herd sizes, as well as the productivity and carrying capacity of their range, and the effects on the caribou of native hunting and predation. Research on fur-bearing animals has been concerned with their ecology and various environmental factors which affect their numbers. The beaver has received considerable attention because it is the furbearer most important to Ontario's trappers.³⁵ Otter and marten have also been studied intensively in an effort to improve the harvest of these valuable furbearers.

Upland game and waterfowl research has been directed toward meeting the increasing demands of small-game hunters. Work on



Moose tagging from a helicopter



Scarification by Rome Plough

cover shrubs for pheasants and rabbits was commenced in 1953. Since 1961 work has concentrated on the ecology of various species of grouse and waterfowl.³⁶

Investigations of wildlife diseases and parasites have concentrated on their identification, their frequency and geographical distribution in Ontario and their effects on wild populations. An illustrated manual* was prepared and published by the Department in 1964, to assist field staff and others to identify the most common parasites and diseases of wildlife.

MECHANICAL RESEARCH. Over the past twenty years the mechanical research section in its workshop at Maple has designed, improved and constructed prototypes of many useful pieces of equipment and tools to meet the special needs of the Department. These have been particularly helpful in the advancement of other research programmes. Many, when tried, proved successful in operation but, as might be expected, some reached a dead-end or were subsequently replaced by other commercially produced equipment. At the beginning emphasis was placed on the testing of forest fire protection equipment such as pumps and hose, and the construction of a pack-tractor to relieve fire-fighters from carrying equipment and supplies to the fire line. Later, emphasis shifted to reforestation devices, such as a heavy-duty tree planter, a seedling lifter and root pruner for nursery use, a walking-stick seeder, and an infra-red seed extractor. During the last ten years the programme has become more diversified. Projects have included the design and construction of an apparatus to measure the deep-swimming ability of hybrid trout; a still for the extraction of oil essences from conifer leaves; a portable stove for the preparation of hot meals at fire-fighters' camps; an aerial tree-seeder for helicopters and fixed-wing aircraft; an improved infra-red fire-hose drier; a power-operated borer for removing large cores from standing trees to assist the wood quality project; a device for folding fire hoses into neat packs for transportation; radar-like apparatus which signals to aircraft pilots their close approach to glassy-smooth water surfaces when landing; and a number of ingenious pieces of equipment for the tubed-seedling planting programme.

**A Manual of Common Parasites, Diseases and Anomalies of Wildlife in Ontario*, by Audrey Fyvie, D.V.M. 84 pp. Department of Lands and Forests.

THE DEPARTMENT AND THE PUBLIC



From the time when the first Commissioner of Crown Lands and Surveyor-General of Woods and Forests, Peter Robinson, took office, down to the present day, great changes have taken place in the Department's conception of its functions. The original conception was dominated by the myth of the inexhaustibility of Canada's natural resources.¹ It was responsible for the ruthless and unchecked exploitation of these resources that took place in Upper Canada during most of the nineteenth century. The Commissioners of that period saw their role as limited to the double task of granting or selling the lands of the Province and securing from the sale of timber an adequate return of public revenue to the Government. This notion, so deeply imprinted on the nineteenth century mind,

created a pattern of thought about Ontario's lands and forests and other renewable natural resources that has lasted well on into the present era. Indeed, up to the time of the reorganization of 1941, the Department of Lands and Forests was looked upon by the public at large as very much of a political plaything, bandied about between contending political parties and squeezed by industrial interests and pressure groups, but little concerned with the basic needs – especially the future needs – of the community as a whole. This state of affairs lasted, naturally, as long as the myth of inexhaustibility continued to dominate men's thinking.

Only gradually, with the awakening interest in forestry during the last quarter of the nineteenth century, as described in Chapters Nine and Ten, did this myth give place to the more enlightened doctrine of conservation. Then indeed a reaction against unchecked exploitation set in, which stressed the absolute duty of Government to preserve, in the public interest, all gifts of nature against the threat of human destruction, wastage and spoliation. By the beginning of the present century, the need for conservation was not only acknowledged; it was showing signs of hardening into a dogma – that all natural resources ought to be preserved in *statu quo ante*. Before long, however, the static idea of conservation began to give way to a more flexible and dynamic concept. The modern principle emerged, that all natural resources ought to be “scientifically managed” for the benefit of the whole community. This idea was the keynote of the reorganization of 1941 and has constituted the dominant philosophy of the Department ever since.

These three stages of policy development are reflected in parallel changes in the attitudes of political leaders, administrative officials, the press and public opinion generally. During the earlier period the Department was involved primarily in the political and business aspects of the changes; and before 1900 there existed few voluntary groups or associations representing public opinion other than the United Fruit Growers' Association of Ontario, the Entomological Society and, of course, the adherents of the American Forestry Congress. Even the lumbermen were slow to organize and keep active as an industrial pressure group, although their views were regularly voiced in a newspaper, *The Canadian Lumberman*.

Forest fires provided the first point of contact between the Department and the general public. In turn, settlers (1854), squat-

ters (1855) and tourists (1904)² had been blamed by woodsmen for apathy and carelessness in face of fire hazards. In presenting to the Legislature in 1878 the first Forest Fire Prevention Bill, the Hon. T. B. Pardee pointed out that legislation by itself could do little to protect the forests without the support of public opinion.³ This he envisaged as being secured by posting proclamations, disseminating leaflets and issuing other propaganda aimed at lumbermen, railway staff and passengers, settler-farmers and the like. Such educational work formed part of the duties of the first fire-rangers sent out in 1885, which aroused "a general and strong interest in the direction of preventing the starting and spread of bush fires was created and kept alive."⁴ But fire prevention and safety attitudes had to be impressed on many successive generations of forest-users and travellers, before they took root. Until modern methods of communication through telephone, flying, radio and television were developed, the public in general remained apathetic towards these problems and tended to leave them to the care of the administrators themselves. Thus as late as 1947 we find General Kennedy, in the Report of the Royal Commission on Forestry, giving it as his opinion that many of the abuses to which the forests had been subjected, both in the early days and up to the time of his enquiry, had continued "because an informed public opinion does not insist that government policy demand a more rational development of our forest resources."⁵

The awakening of public interest in conservation may be said to date from the American Forestry Congress of 1882, and especially its Montreal sessions in the same year.⁶ Here hundreds of individuals from all parts of the North American continent found the opportunity, for the first time, to voice their opinions on the need for forestry and conservation reforms. Thereafter followed the action of the Ontario Government in establishing the first clerkship of forestry under the Department of Agriculture and later transforming this into the Bureau of Forestry attached to the Crown Lands Department. This provided a centre for twenty years of continuous propaganda for the new ideas, and led directly to the appointment in 1904 of the first professionally-trained provincial forester. But already before this a sufficient body of enlightened opinion had been gathered throughout the Dominion to warrant the setting up in 1900 of the Canadian Forestry Association, under the chairman-

ship of former Quebec Premier Sir Henri Joly de Lotbinière.⁷ The C.F.A. was a laymen's association of political and business men and of administrators interested in drawing public attention to Canada's forest resources and, later on, to the problems associated with the management of all renewable natural resources. At the time of its foundation there were as yet no professionally-trained foresters in Ontario or Canada. But in 1903 Dr. B. E. Fernow delivered his now famous course of ten lectures on forestry at Queen's University, Kingston, in the course of which he listed "three different ways in which the State can assert its authority and carry out its obligation to protect the interests of the community at large and of the future against the ill-advised use of property by private owners – namely, by persuasive, ameliorative or promotive measures, exercising mainly its (1) educational functions, (2) police functions, and . . . (3) ownership and management by its own agents." In connection with the first of these, he stated that "the educational function of the state is now recognized as one of the most prominent and beneficial in all civilized nations, although the degree and generality of its application still vary." He added his belief that "finally, in each country, it will be considered a part of the proper forest policy for some public institution of learning to *furnish instruction in forestry*."⁸ Next year the Canadian Forestry Association requested the Ontario Government to make a grant towards the establishment of such a school; and in 1907 the Government took steps to establish at the University of Toronto the Faculty of Forestry, with Dr. Fernow as its first Dean.

Another achievement of the C.F.A. was the holding, in 1911, at the request of Sir Wilfrid Laurier, of the first national resources conference in the Dominion. The Association continued to concentrate its attention on an educational campaign to arouse public interest in forest management, leaving to other bodies, such as the Canadian Institute of Forestry (launched in 1908) and the Ontario Professional Foresters' Association (established in 1957), the narrower task of gathering professional foresters together in an organization of their own to discuss technical problems of forestry.

Until after the end of World War II the C.F.A. remained a single nation-wide body; but around 1949 provincial branches made their appearance, among which was the Ontario Forestry Association. By 1960 the C.F.A. had become a federation drawing its support

from national concerns only and limiting its activities to national objectives. On the other hand, the O.F.A., now existing independently with a provincial charter, widened its scope to cover not merely the forests of Ontario, but all other renewable resources, including wildlife, soil and water. It has today an individual and corporate membership of five hundred, and is financially supported by the Government (through the Department of Lands and Forests) and industry. In 1953 it took part in the launching by the C.F.A. of a Canadian tree farm movement; and it established the first certified tree farm in Ontario on Manitoulin Island, on the holdings of the Ontario Paper Company. This company had for a number of years been encouraging the farmers on the Island to grow more trees,⁹ to provide a future supply of wood for its paper mill in Thorold.

It is in the schools of the Province, and among youth generally, that the main influence of the C.F.A. is felt today. Thus, in cooperation with the Departments of Education and Lands and Forests and the Ontario Hydro Commission, the C.F.A. operates the Dryden High School Conservation Camp which was established in 1957 by the Dryden Paper Company as an annual educational programme for thirty-six selected Grade Ten students of both sexes. The same bodies have also participated in the more recently established conservation school for primary and secondary school students of the K.V.P. Company in Espanola and the Marathon Paper Company in Marathon, as well as for Grade Eight students in Nakina and Long Lac. Further, the O.F.A. encourages conservation activities among Boy Scouts and Girl Guides, and maintains membership on the Conservation Council of Ontario.¹⁰

The main financial support for the O.F.A. has come from the Ontario Government, which makes it (through the Department of Lands and Forests) an annual grant of \$10,000. Some support is also forthcoming from the pulp and paper industry; yet the expansion of its work is seriously hampered by lack of finance. Comparatively few business organizations in Ontario* have recognized their responsibilities towards conservation of the renewable resources from which, directly or indirectly, so much of their income is derived. They seem to feel, in particular, that conservation education

*Major organizations such as Forest Industries Ltd. and the Pulp and Paper Association of Canada have a national, rather than a provincial concern with conservation.

is the sole responsibility of Government and that there is no need for their contributions, either through advertising or through direct donations, to the support of the non-profit-making organizations that are struggling to carry on conservation work. To this attitude, of course, there are some notable exceptions: the monthly newsletter of the Royal Bank of Canada, paying constant attention to the entire field of natural resources; and the same firm's booklet on wildlife conservation for use in schools, which has frequently been reprinted. Again, Cities Service Oil Limited (British Petroleum) has carried out commendable educational work in the field of water pollution. In addition, many well-known lumbermen – such as the late Ben Avery of K.V.P., Clark Davis of Abitibi, William Phipps of Kimberly Clark and Gordon Godwin of the Ontario Paper Company – were active participants in the O.F.A.'s educational work.

The importance of this work lay in the fact that it represented an expression of views on forestry by a group of professionally-trained foresters who were best qualified to give them.¹¹ Of course, most such foresters worked in the service either of the Government or of private industry: as such they were not often in a position to voice public criticism of policies involving their employer, even had they desired to do so. One interesting exception to this rule is the case of a professional forester, John C. Irwin, who practised only briefly before entering the publishing business, yet retained a strong interest in forestry and conservation. During the crucial years from 1935-1946, when the Department of Lands and Forests was passing through a difficult transitional stage, he conducted a persistent and disinterested one-man educational campaign, to create an enlightened public opinion in favour of a long-term, sound forest management programme. There is little doubt that, in this field, he accomplished more than any other unofficial person had ever done.¹²

Irwin's criticisms were aimed primarily at the policies – or lack of policy – of the Ontario Government and at the wasteful practices of many of the woods operators. He often aroused the ire of the upper echelon of the governments in office at the time by his critical addresses to service clubs, his letters to the press, his radio talks (such as a series, "What's Wrong with Forestry in Ontario?", 1938)¹³ and pamphlets. In 1940, as indicated in Chapter Seventeen, he gave evidence before the Select Committee of the Legislature. Subsequently for a year, 1945-46, he published a monthly magazine,

Save Ontario Forests, devoted to "furthering a proper understanding of the contribution Ontario's forests have and can make to the economic and spiritual welfare of our people", and condemning what he termed "the lack of vision that has characterized provincial administration of this resource since the beginning."¹⁴ Irwin received considerable support in provincial newspapers and submitted two briefs to the Kennedy Commission of 1947. Many of the reforms he advocated between 1935 and 1946 were carried into effect after the 1941-43 reorganization of the Lands and Forests Department.

During the period that the C.F.A. and O.F.A. were so successfully indoctrinating Ontario public opinion on matters of forestry and forest resources, a parallel development was taking place, also largely through voluntary agencies, in the field of wildlife resources. Here, too, the first step was to explode the myth of inexhaustibility. This began with the revelations of the Ontario Fish and Game Commission of 1890, which aroused the public to the appalling destruction of animals and birds in the Province and created a resolve to protect the economic and recreational values of wildlife. At first this desire was largely spear-headed by the efforts of a few individuals, who dramatized and maybe overemphasized the problem in ways calculated to stir up public sympathy. Outstanding among these was Jack Miner, who in 1908 established his world-famous bird sanctuary at Kingsville, Ontario, which eventually became a model for hundreds of similar conservation projects in the U.S.A. and elsewhere.¹⁵ Another was Archie Belany, the northern trapper who in 1925 underwent a romantic metamorphosis which provided him with an Indian ancestry and background, enabling him to launch out on his remarkable literary and practical career as a beaver conservationist.¹⁶ "Grey Owl" published numerous best-selling books, depicting the lives of his beaver friends, "Rawhide and Jelly Roll"; these made a powerful appeal to young people and so paved the way emotionally for the modern movement for conservation education.

Besides these efforts of individuals may be placed the work of important groups. In many parts of Ontario, both north and south, there sprang up late in the nineteenth century a number of local hunting and fishing clubs, which carried on a vigorous campaign against the continued depletion of fish in our rivers and the growing scarcity of game in our forests. During 1920 these clubs federated into separate associations of hunters and anglers; these, in turn,

combined their forces from 1941 on. First the anglers and hunters of the south united to form the present Ontario Federation of Anglers and Hunters; then, four years later their northern counterparts were brought into the same organization, which now embraces some two hundred clubs.¹⁷ The union enabled the southern and northern groups to speak with a single voice and increased their influence on the Fish and Game Committee of the Legislature by eliminating their former often contradictory recommendations. The Anglers and Hunters not only pressed for the enactment of needed regulations, but worked hard to educate public opinion to understand and support measures of fish conservation. Among their best-known efforts were the radio talks given by Dr. A. B. James during his presidency of the Federation from 1932-35, and an Essay Contest on "How to Keep Good Fishing in our Lakes and Streams" conducted in the schools.

Another non-profit-making group which has made a big contribution to wildlife conservation is the Federation of Ontario Naturalists, which was established in 1931 and now represents over sixty clubs and associated organizations. The founders of this Federation made it plain that they had no quarrel with the legitimate pursuit of wildlife as game; but they insisted that the naturalist's point of view was equally valid and worthy of recognition. Through its frequent briefs to the Ontario Government on the subject of land-use, nature reserves, wilderness areas, use of parks, protection of predatory birds, use of insecticides etc. – as well as by positive measures such as sponsorship of the Bruce Peninsula Nature Trail and the publication of its *Young Naturalist's Magazine* – the Federation of Ontario Naturalists has exerted a big influence on the development of Provincial Parks and recreational facilities. In this connection, it is interesting to note that the Department of Lands and Forests today finds it difficult to secure the services of enough trained naturalists to meet its growing need for more lectures, guides, trail leaders, etc. required to satisfy the curiosity of the hundreds of thousands of annual visitors to the parks of Ontario.

With the Federation of Naturalists should be coupled another non-governmental agency, the Canadian Audubon Society, which is primarily concerned with the welfare and protection of birds, but has widened its scope to embrace conservation of other renewable resources. Its booklets, *Conservation Illustrated* and *The Young*

Naturalist's Handbook, have secured a wide distribution in primary schools. In the same year 1948, when the Canadian Audubon Society was founded, another significant event took place, the founding by Francis H. Kortright of the Canadian National Sportsman's Show, which helped to make available every year grants of thousands of dollars for the promotion of educational and research projects in conservation. However, Kortright's main achievement in the conservation field was the fulfillment of his long-entertained dream of bringing together all the various bodies engaged in conservation work to form a common front through a single, representative Council. The stimulus to this can be traced back to the National Wildlife Conference of 1939, the first of its kind in Canada, which focussed public attention on a nation-wide scale on the conservation needs of the country as a whole. Believing that maximum results could only be attained through coordinated and cooperative effort, Kortright succeeded in 1952 in bringing into being the Conservation Council of Ontario, consisting of seventeen member organizations representing agriculture, forestry, fish and wildlife, naturalists and sportsmen. This Council has since presented many briefs to the Ontario Government on the subject of land use, fish and wildlife management, parks, nature reserves, water pollution, soil conservation and forestry.

During the winter of 1953-54 this Council sponsored a series of extension lectures on conservation under the Extension Department of the University of Toronto. The course was aimed primarily at teachers, but failed to arouse the interest in the subject that had been expected. This was in spite of a recommendation contained in the 1950 report of the Select Committee on Conservation and specifically drawn to the attention of the Department of Education, to the effect that "greater emphasis should be given to the teaching of conservation in both elementary and secondary schools, rural and urban."¹⁸

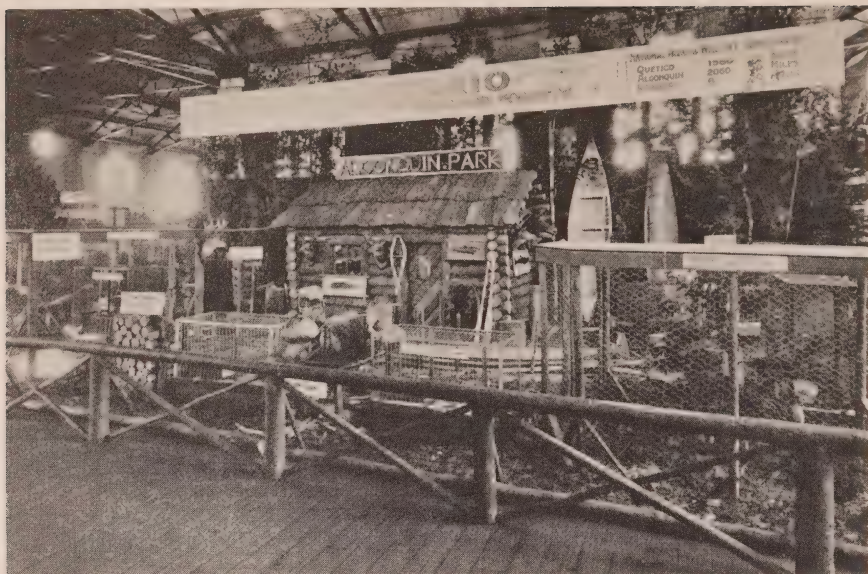
In 1946 the first Conservation Authority in the Province, the Ganaraska Region Authority, was set up.¹⁹ Subsequently, the number of these authorities was increased to thirty-two, most of which were established on the watersheds of southern Ontario, where flooding, soil erosion and water pollution were major problems. Since these Authorities are maintained by provincial, federal and municipal grants and the remedial measures they adopt to correct the

above-mentioned evils produce in most instances wider opportunities for public recreation, their work has valuable educational implications. Wisely, the Authorities have given top priority in their educational programmes to the needs of youth, through programmes such as "Resource Rangers" which are aimed at Boy Scouts, Girl Guides and school audiences.

In 1959 the Toronto Board of Education set an example of what could be done by sponsoring the Toronto Island Nature and Conservation School. This was the outcome of ten years' persistent planning; yet since the school had a capacity to serve less than half of the Grade 6 classes in the city, there remained an obvious need for additional facilities. The Ontario Department of Education was reluctant to recommend to the Legislature the enabling legislation required for an expansion until the popular demand for it had been more clearly manifested; but the Metropolitan Toronto and Region Conservation Authority took up the challenge by opening in 1963 the Albion Hills Conservation School, where students mainly from Grades 9 and 10 can live in for a week at a time, while receiving instruction in natural science subjects.²⁰

Some twenty years after the first National Wildlife Conference of 1939, the Governments of Canada and the ten provinces decided to collaborate in holding an even more important gathering to discuss conservation in its widest aspect. This was the "Resources for Tomorrow" conference which met in Ottawa in 1961. The extensive publicity this received in the press probably informed more people about the present state of Canada's renewable resources and the problems they present than ever before. The publication by the *Toronto Globe and Mail* in booklet form of the principal papers given at this conference met with a wide public response, which proved that the dedicated efforts of half a century's work by individuals and societies for resource conservation were at last coming nearer to fruition.²¹

In this great work of awakening and enlightening the public, the Department of Lands and Forests had taken a very modest part down to the time of the major reorganization of 1941. It relied mainly on the annual publication and dissemination of its traditional *Report*, which with the passage of years grew ever larger and more subdivided into sections; it was written in technical language and, however embellished with photographs and statistics, was un-



First Provincial Parks Exhibit, 1921

likely to reach more than a tiny minority of these affected by the discharge of its functions. As long ago as 1921, under the influence of World War I, the Department staged its first public exhibit at the Canadian National (then the Toronto) Exhibition; thereafter this became an annual event. The 1921 Exhibit, incidentally, featured prominently not only the work of the Forestry Branch, but examples of wildlife from Algonquin Park, which proved a popular item from the start.²² In fact, it soon became plain that C.N.E. visitors, both young and old, were more attracted to the live mammals, fishes, birds and reptiles than to any other part of the Department's exhibit. Game fish led the way in popularity, with snakes an ever closer runner-up. This wildlife exhibit served as useful bait to draw the public on to view the other educational features of the exhibit – forest management, forest fire prevention and gun safety. Its basic popularity must have impressed itself strongly on Frank MacDougall during his ten-year term of office as Superintendent of Algonquin Park, and perhaps contributed to his decision, on becoming Deputy Minister in 1941, actively to develop the “public relations” side of the Department work. He assigned this task to the new Operations Division, which was made responsible for using

all the modern media of information, to give the public an understanding and appreciation of what the Department was doing. Within the Division an Information and Education section was constituted, charged with making direct contact with the public through lectures to service clubs and teachers' organizations, demonstration trips, correspondence, school work and cooperation with other agencies – again with the aim of creating a new public attitude (especially in the younger generation) towards the use and management of natural resources.²³

Propaganda for forest fire prevention ranked high on the list of the functions of this section. One of its first big undertakings, therefore, was the launching of a new campaign on a full-time basis in northern and northwestern Ontario. Influenced, no doubt, by the writer who urged that "like religion, conservation must start early and in the heart and mind", the fire prevention campaign was aimed primarily at young people in primary and secondary schools and in summer camps during the school recess. Adult education was also developed, in teachers' colleges and conferences, in church groups and service clubs and in public meetings. The program for schools was endorsed by the Department of Education, which circularized its inspectors asking them to cooperate as fully as possible in using the Department's lecturers. School boards and principals responded by finding a place for these lectures in that period of the school time-table regularly set aside for "Assembly". They provided a stimulus to pupil-interest in conservation which teachers could follow up afterwards at will in their classrooms.²⁴

For several years after the end of World War II the Department continued to supply a special lecturer to work in each of its six administrative regions. But in 1950 it withdrew these and made each of its twenty-two district offices responsible for carrying on its own educational programme, using its own staff. This decentralization should have led to a steady growth of the work; but in practice the growth was unevenly distributed over the Province, possibly because of local shortages of lecturers who possessed the special qualifications needed for "selling" conservation to school children. As a result, although the total pupil audience for the Province as a whole continued to grow numerically, the increase was concentrated mainly in the larger urban centres, while there was a decline in the remote rural centres, where the need for educational work remained

greatest. The situation, and the change of policy which produced it, have been deplored by many school inspectors.

The Conservation Information and Education Section made extensive use of the printed word as a medium for informing the general public, as well as the school, about the work of the Department. For several years, from 1944 to 1960, it published a monthly magazine *Sylva* which, originally intended for Departmental personnel, soon widened its scope far beyond that of the conventional "house organ". It not only supplied informational features of general interest, but carried a large number of articles and pictures of historical value, contributed by staff members with long experience in the Department or recollections of a youth spent in the service of private logging companies in the heyday of pine harvesting. Many historical items were thus put upon record which might otherwise have been lost to posterity; and some of this material has been drawn upon in the preparation of the present volume. *Sylva* built up a wide list of subscribers both in Canada and abroad, and won several awards of merit in the United States. However, in 1959, the Conservative Government, facing Opposition fire directed against a new magazine venture of the Department of Highways, responded by making a general cut-back of departmental magazines, of which both *Sylva* and the Conservation Authorities Branch magazine *Our Valley* were the victims. Despite strong editorial protest from many Ontario newspapers, as well as the public in Canada and the U.S.A., *Sylva* passed out of existence with the first issue of its sixteenth volume in 1960.

Besides *Sylva*, the Section has published nearly one hundred books, booklets and leaflets of general public interest, as well as many technical brochures intended for specialist students of fish, forest and wildlife management. This does not include printed copies of departmental regulations, which reach an estimated school and adult audience of over one million. News releases, newsletters, and over forty thousand photographs are distributed and approximately thirty thousand letters from the public are answered each year. The Section also maintains a library of motion picture films, and stages visual exhibits at the leading fairs, shows and exhibitions, including the Canadian National Exhibition and Canadian National Sportsman's Show in Toronto, the Central Canada Exhibition in Ottawa, the International Ploughing Match and Royal Agricultural Winter

Fair in Toronto. At the C.N.E. during the past seven years the Section has maintained a poster competition for children of between seven and fourteen years, with valuable prize awards. The posters are prepared in the Ontario Government building in the full view of visitors and the subject of each poster must relate to forest fire prevention, fish and wildlife conservation, boating or water safety. Originality, rather than artistic skill, is the main criterion by which they are judged by a committee of three Toronto newspapermen. Over the years nearly all of the winning posters have been concerned with forest fire prevention – no doubt because this has a longer history of propaganda behind it than the other topics.

THE DEPARTMENT IN ITS WIDER SETTING



In the course of its work the Department of Lands and Forests has developed many contacts with other official bodies, both inside Ontario and in other provinces, as well as with the federal Government and some foreign governments. To describe all these contacts in detail would require much more space than is available in the present volume. Here it is possible to give only a brief summary of the main channels of communication and cooperation.

To begin with Ontario itself, the reader will find at the end of this book, in a special inset, a folding chart which tabulates the services rendered by the Department of Lands and Forests to, or in collaboration with, fifteen other Government Departments, eight boards and commissions and two academic or research organizations, all

in Ontario. Besides the main channels of communication that arise out of the Department's regular operations, a number of lesser known but important items can be found in this list. They include the study of water pollution problems; the design of dams; the use of pesticides; the investigation of smelter fumes; the supply of decorative trees for public works and centennial planting projects; the servicing of farmers' fish ponds; the disposal of lands required for highways, the development of new town sites; the granting of public land for historic sites; the use of prison labour for silviculture and parks work and for fighting forest fires;* the control of wolves and bears; the investigation of methods of feeding mink; and the supply of documents and manuscripts to the Ontario Archives, etc. This selection is enough, by itself, to indicate the wide range and remarkable variety of the Department's undertakings.

The Department's work has also brought it into contact with the Governments of other provinces. In resources matters there have always been inter-provincial understandings, varying all the way from cooperative arrangements for fire fighting, on the one hand, to lukewarm (or even hostile) enforcement of regulations aimed at closing markets for illicit furs (Quebec) or suppressing the shipment of illegal wolf bounty material (Manitoba), on the other. The highest degree of cooperation has, naturally, occurred in the fight against the forest fire peril or against natural disasters. Three examples of such successful cooperation may be noted. First, there is the informal Forest Protection Agreement between Quebec, New Brunswick and Ontario. This began with a conference between the three provinces held in Quebec City, in February, 1961, on the general theme of "A New Look at Our Forests".¹ The agenda ranged over a wide variety of topics, including use of aircraft, inter-communication system, weather forecasting, research, education of the public, forest closures and reforestation problems, provision of access roads and forest inventories, etc. The chief points agreed upon after discussion were that the three provinces should exchange aircraft

*The use of such labour has been developed over the past nine years. It is supplied from the prison camps (such as Camps Hendrie and Hillsdale in Simcoe County, McCreights Dam at Thessalon etc.) administered by the Ontario Department of Reform Institutions and from other camps (such as Beaver Creek and Landry Crossing) operated by the federal Commissioner for Penitentiaries. Prison labour is used for tree planting, parks clearance, roads improvement and country forest work. In principle, of course, such prison labour can only be used for work which does not replace free paid labour.

in emergency, use a common wavelength for interprovincial communications between Quebec City, Toronto and Fredericton, standardize certain portable field equipment, designate liaison officers for interprovincial cooperation and take steps to arrange meetings with the federal authorities for forest protection research and for military aid for forest protection. Since 1961 further informal, but regular, meetings have been held between the three provinces.

Second, at the time of the disastrous Winnipeg Flood of 1950, which made eighty thousand families homeless and caused millions of dollars' worth of damage, the Ontario Department of Lands and Forests was directed by Premier Leslie Frost to send emergency aid in response to a call for help from Manitoba's Premier Campbell. On May 8th the Department dispatched to Winnipeg four planes loaded with two hundred and seventy-five thousand sandbags and a quantity of portable pumps and rubber boots. These contributed useful material for the building of the dykes that were needed to bring the invading flood waters under control. P. O. Rhynas, chief of the Department's Operations Branch, visited Winnipeg at this time to supervise personally the arrival and disposition of the material.²

Third, in August, 1961, – a particularly bad year for forest fires in Ontario and other parts of Canada – the Province of Newfoundland found itself in a bad situation where “extreme burning conditions, lack of equipment, lack of skilled fire fighters, foremen and administrative personnel together with unpaid . . . fire fighters, prevented any effective plan for a major offensive against the large fires being carried out.” Accordingly the Ontario Department of Lands and Forests sent over to Newfoundland one of its Otter aircraft, with two pilots, to help in the suppression of disastrous outbreaks at Carmonville and elsewhere. The Otter was successfully used in water-dropping operations and remained on the scene until the end of the month.³ In the summer of 1966 two Otters were sent to Alberta to take part in fire-fighting work in that Province.

There have been several cases of informal interprovincial cooperation between Quebec and Ontario. For example, without any formality other than correspondence, the two Provinces have agreed to permit the free movement of hunters and anglers on both sides of the median line in the Ottawa River, that is the boundary between them.⁴ This is, of course, a matter of good neighbourliness. Another example has been the participation of boys from Quebec

in the 1965 and 1966 Junior Forest Ranger programmes. By arrangement with the Quebec Department of Lands and Forests, twelve French-speaking young Canadians from Quebec joined an equal number of English-speaking youths from Ontario, to receive fire-training in a camp at Racine Lake, north of Chapleau.⁵ On various occasions the two Provinces have exchanged aircraft for fire-fighting work; and recently a formal agreement for mutual aid and cooperation has been drafted.

These examples of inter-provincial cooperation have been paralleled by a similar growth over the years of cooperation between the federal and provincial Governments. In the early days of Confederation this did not exist, so far as Ontario was concerned. In fact, in Chapter Seven of this book we mentioned some of the clashes which took place between the Ontario and federal Governments (involving the Crown Lands Commissioner's operations) in the last quarter of the nineteenth century, when Ontario found it necessary to assert its rights under the British North America Act. By the beginning of the present century, however, the stresses of the early period had worn off, and opportunities were occurring for fruitful cooperation. Provincial expenditures were increasing fast, while federal Government revenues were substantially rising. Accordingly, cooperation developed in two fields of administration; first, where the federal Government made grants to the provinces to enable them to discharge responsibilities which went beyond the scope of their existing financial resources; and second, in matters that required economic regulation or coordination under national legislation.⁶ For instance, during the period between the two World Wars, that covered the trade depression of the 1930's, federal aid was given to the provinces in connection with the settlement of war veterans on the land, and with the relief of unemployment. Both of these were matters which, in Ontario, were of concern to the Department of Lands and Forests, which at that time was undergoing a transition of its function from "exploitation" to "management" of resources, as expressed in legislation passed between 1926 and 1947. The experience gained in these and other federal-provincial efforts led to a general acceptance, by the time of World War II, of "joint administration of projects requiring positive and constructive cooperation, if they are to be carried out efficiently."⁷

Forestry was one of the first activities to come under this definition, since the federal Government was actively concerned with forestry policy across Canada as a whole, while the provinces were each concerned with managing and developing their own forest resources. A number of interprovincial meetings on forestry matters were held in the 1940's (for instance, to secure military protection for the forests in time of war), paving the way for the calling by the Hon. R. Winters of a federal-provincial forestry conference at Ottawa and the subsequent enactment in 1949 of the Canada Forestry Act. This Act was specifically framed "to promote cooperation between the federal Government, provincial governments and industry, in the conservation of Canada's forests."⁸ It aimed at providing for the protection of forests against fires, insects and disease through "forest experimentation", which was defined as experimentation and demonstration in forest management, silviculture, forest pathology, forest entomology and forest fire protection. The Act gave the federal Minister of Resources and Development (later the Minister of Northern Affairs and National Resources) power to make agreements with any province to carry out such projects. Several years of negotiation followed the passing of the Act, leading, in the case of Ontario, to the conclusion of a number of "composite agreements" to be carried out by the Department of Lands and Forests, acting on behalf of the Province. These agreements covered forest inventories and reforestation (initiated in 1951 and concluded in 1964), forest fire protection (1957), construction of forest access roads, trails and airstrips (1958), and stand improvement operations (1962). For ten years the agreements were implemented under the terms of the Act of 1949; but in 1960 the Act was repealed and the agreements were then transferred to the newly-created federal Department of Forestry.⁹

The inventory and reforestation agreements provided for federal grants-in-aid amounting to one-half of the Province's expenditure on preparing forest inventories, making stand improvements, building forest access roads and carrying out fire protection projects in conformity with specifications; they also included specific grants to help plant and seed trees. The inventory programme was intended to provide a basis for forest administration and management across the whole country, and to provide the data necessary for a general statement of Canada's forest resources as a whole. It included, too,

the making of reconnaissance surveys to locate the areas of different classes of forests and to provide estimates of timber volume. Altogether, the funds allotted by the federal Government to Ontario under the composite forestry agreements amounted to one million, six hundred and fifty thousand dollars annually.^{10*} The chief characteristic of these agreements was their increased flexibility, which allowed the Province to select priorities over a wide area and to allocate funds accordingly.

Another agreement, which dated from September 30th, 1952, and was renewed in 1963, dealt with forestry research.¹¹ It divided this field between the two authorities, federal and provincial. Under the agreement the federal Government was to conduct, upon the recommendation of a joint advisory committee (half Ontario-appointed) forest research studies with particular reference to problems affecting Ontario. The federal Government was to supply the necessary staff and equipment, and Ontario the required accommodation. The results of the research studies were to be made available to Ontario, while the federal Government agreed to comply with reasonable requests from Ontario for advice and assistance. Most of the staff undertaking the research were to be federal, but the research staff of the Ontario Department might be involved occasionally. The main research centres were established at Maple, Richmond Hill and Sault Ste. Marie.

A second research agreement, signed in 1952 but dating back to 1945 (when it was originally made with the federal Department of Agriculture), covered the establishment and operation of two laboratories, the Forest Insect Laboratory at Sault Ste. Marie and the Laboratory of Forest Pathology at Maple. Under this agreement,¹² the parties undertook to cooperate in the control of forest insects and diseases through entomological and pathological studies. Ontario promised to maintain both laboratories; the federal Government agreed to provide the necessary personnel and equipment; and the programme of research was so framed as to give preference to forest insect and disease problems in Ontario. A joint advisory committee appointed by the federal Minister of Agriculture and the

*On September 14, 1966 at a meeting of the federal provincial tax-structure committee in Ottawa, Finance Minister Sharp announced the discontinuance of these shared-cost forestry agreements and the saving of the one and two thirds million dollars of federal grant involved (*Toronto Globe and Mail*, September 14, 1966).

provincial Minister of Lands and Forests, was to make recommendations that would guide the laboratories' studies.

A third research agreement, signed in 1951 between the federal Department of National Defence and the Ontario Department of Lands and Forests, made provision for the use by the Province of Camp Borden for research into silviculture. In addition, a specific agreement, having nothing to do with research, was signed in 1961 between the National Capital Commission and the Ontario Department of Lands and Forests. It provided for a fifty-year lease of land near Ottawa by the Commission, and arranged that the Ontario Department should carry the responsibility of managing this land for forestry purposes.

Along with forestry, the whole question of the conservation of renewable natural resources now began to come under review. In 1958 the then Prime Minister, Rt. Hon. John Diefenbaker, announced the calling of a national conference on conservation, in which each province was invited to participate officially. The resulting conference, entitled "Resources for Tomorrow", met in Montreal during October, 1961, for a week. Its purpose was to identify the major problems calling for attention in the field of renewable resources; to examine what was being done to solve these problems and to clarify the impediments to future progress and the possible steps that might be taken to remove them. The Conference led to the setting up of a Canadian Council of Resource Ministers, for the purpose of improving inter-governmental liaison in the field of renewable resources. Its membership comprised the eleven resource Ministers of the provinces and the federal government, with a rotating chairman – the first being the Hon. J. W. Spooner, at that time Ontario Minister of Lands and Forests. At its second meeting in 1963 it organized its work under four branches – research, information and education, policy and legislation and organization and administration. It also drew up an inventory of all the legislation, programmes and agreements affecting Canada's renewable resources down to March, 1964. In 1962 the Council had appointed an advisory committee to develop its plans further; one of the representatives of the provinces on this committee was G. H. U. Bayly who on June 16th, 1966, became Ontario's Deputy Minister of Lands and Forests.¹³

According to the inventory of 1964, the Province of Ontario is

now involved in thirty-two resource agreements,¹⁴ of which some eighteen to twenty are of specific concern to the Department of Lands and Forests. The agreements are in some cases formal, e.g. the composite forestry agreements; and in other cases informal, sometimes resting on exchanges of letters between responsible officials and depending on mutual appreciation of a common problem. In addition to the forestry programmes which have already been outlined, there are six other categories relating to land, agriculture, water, fisheries, wildlife and recreation.

In regard to lands, the federal Government (through the Department of Citizenship and Immigration, now the Department of Northern and Indian Affairs) shares with Ontario the cost of constructing roads on Indian Reserves. For example, in 1960 the Department of Lands and Forests received permission to use a road right-of-way for ten years through Constance Lake Indian Reserve, on condition that it maintains the road on a year-round basis.

In agriculture the Department's chief task has been to share in the working out of the Agricultural Rehabilitation and Development Act (ARDA) of 1961. This Act is designed to remedy as far as possible the past mistakes made in the use of unsuitable land for agriculture and to alleviate the serious national problem of low incomes in rural areas. It is intended to help with the adjustments that become necessary as a result of the major social, economic and technological changes that affect agriculture in the rural areas of Canada. This involves making provision for the more effective use of land classified as "marginal" for agriculture; for the maintenance and increase of the productivity of agricultural land through soil improvement and conservation; for finding opportunities for better incomes and employment of rural people in rural areas; and for conducting the research necessary to solve these problems. A general federal-provincial ARDA agreement was signed by all the provinces in the autumn of 1962, to last until March, 1965, when it was renewed for a further period. It was followed by the concluding of sub-agreements with each province covering alternative uses of land, establishment of community pastures, rural development, soil and water conservation and research. In Ontario the director of ARDA works within the Department of Agriculture, but four other departments, including Lands and Forests, are closely involved with the programme. So far Ontario has used ARDA mainly to acceler-

ate existing agricultural projects, and to study ways of developing incomes and employment in rural areas.¹⁵

In regard to water, the Ontario Department of Lands and Forests participates, through the appointment of a representative, on the Ottawa River Engineering Board,¹⁶ set up in 1962 by the federal Government, Ontario and Quebec, to undertake joint studies of the flow forecast and regulation of the Ottawa River, and their effect on the St. Lawrence River.

The field of fisheries concerns chiefly certain joint agreements and programmes which relate to the Great Lakes. By international agreement arising out of the Great Lakes Treaty between Canada and the United States, the two countries have agreed upon a common policy of fisheries research affecting areas of the Great Lakes which are of interest to Ontario and five American states. In 1960 the federal Department of Fisheries and the Ontario Department of Lands and Forests agreed to carry out this policy, dividing between them responsibility for the research and other activities involved.¹⁷ Accordingly the federal Government assumed responsibility for lamprey research and control in Lake Superior and for general fisheries research on Lakes Huron, Erie and Ontario, and for the collection of fisheries statistics and the making of hydrographic surveys. Following the conclusion of all these agreements, a Great Lakes Fisheries Commission was set up with headquarters at Ann Arbor, Michigan. It spends most of its budget (thirty-one percent of which is contributed by Canada) on lamprey control. To implement the policy statements agreed between the governments, and to carry out a continuous programme of research, the University of Toronto maintains the Great Lakes Institute, which has a two hundred thousand dollar budget, including a twenty-five thousand dollar grant from the Department of Lands and Forests.

In the field of wildlife, the Department of Lands and Forests has been mainly involved in two kinds of undertaking – resource development (including the conservation of fur resources) and the making of inventories of wildlife. In 1950 a Fur Conservation Agreement was worked out between the federal Government and Ontario, under which the former agreed to pay grants of fifty percent (up to a maximum of seventy-five thousand dollars a year) of the money spent by Ontario on the programme.¹⁸ The agreement remained in force until 1962, when it was superseded by a new ten-year agree-

ment between the federal Department of Citizenship and Immigration and the Ontario Department of Lands and Forests. This established plans for the management of renewable natural resources in the Bruce Peninsula and the administrative district north and west of the south boundary of Parry Sound and Pembroke. Under this agreement projects can be undertaken for commercial fishing, domestic and sport fishing and hunting (including public hunting on Indian Reserves), the harvesting of wild crops (rice, blueberries, etc.), forestry and forest protection, and the processing and marketing of fur and other products. Ontario agrees to spend two hundred thousand dollars annually on these projects, of which the federal Government contributes up to one-half.

In addition, by agreement with the federal Indian Affairs Branch, Ontario uses Beckwith Island in Georgian Bay for research into grouse. Also, Ontario staff operate a fur farm on Akimiski Island (James Bay) for the North West Territories Council.¹⁹

In connection with the Agreement of 1962, the Department has been able to make a significant contribution to the welfare and development of the Indians of northern Ontario. At the outset, its work was mainly limited to improving fishing techniques (such as methods of netting, cleaning and packing etc.) among the Indians of the Patricia District; gradually, however, the scope of the programme was substantially widened. It now includes giving four or five hundred Indians each year a regular training in forest protection work (under the Forest Protection Branch of the Department), for which they have a special aptitude; and subsequently issuing to them certificates of proficiency which help to assure them better rates of pay. In another field for which the Indians possess special gifts – tree-planting – up to seven hundred Indians are employed annually by the Silviculture Section of the Timber Branch. Again, in the field of fur conservation, the Indians have been given training in modern methods of trapping, and help in bettering methods of marketing their catch. In one area, Kenora, the Indians of that district have been granted a special extension of the season for trapping beaver on the grounds that, to them, the beaver is important as a source of meat (for subsistence) as well as a source of fur for trading.

The Department has also taken many steps to improve the poverty conditions of the Indians of Moosonee and other centres.

In general its officials, in carrying out the plans made under the 1962 Agreement, have often found themselves acting as unofficial "godfather" to the Indian settlements in which they are working. This applies not only to provision of housing, food and equipment for these settlements, but also to supplying emergency help to settlements hit by sudden dangers or disasters. For example, in the spring of 1966, after the severe floods at the isolated settlement at Winisk, on Hudson Bay, a departmental airplane was dispatched there from Timmins to help link the stricken community with headquarters. As a result of these "mercy flights" and other similar relief operations, the prestige of "L and F" stands very high with the Northern Indian population, and its officials, wherever they go, are received with a very high degree of respect. Conversely, the Indians themselves have a voice in the working of the Agreement, through their Indian Advisory Committee, which appoints a representative to sit on the Provincial Indian Advisory Committee of the Government of Ontario.

* * * * *

Without any legislation or formal agreement seven provinces, including Ontario, have cooperated informally to provide the federal Government with needed information relating to wildlife management in Ontario. Thereby two purposes have been served: first, knowledge has been maintained about the status of waterfowl population; second, the population distribution of caribou, particularly in the Northwest Territories and Ungava, Labrador, has been determined. This cooperation has involved use of professional personnel and equipment, but no financial contributions.²⁰

In the same category of informal understandings falls the correspondence that ensures that the Department of National Defence will provide help – armed forces personnel and equipment such as helicopters – to the provinces in time of emergency; the informal cooperation that has taken place in the field of infra-red detection of forest fires; and the short and long range weather forecasts provided to the provinces by the Meteorological Branch of the federal Department of Transport.²¹

With rare exceptions, the officials who have had to operate these agreements, both formal and informal, have been reasonably satisfied with the degree of consultation that has taken place prior to their implementation. Once confidence was gained and suspicion of

motives allayed, both provincial officials and federal liaison officers found that they derived mutual benefit from the greater knowledge they gained of one another's projects and methods.²² Nothing has occurred which would invalidate the opinion expressed by Premier John Robarts at the Federal-Provincial Conference of November, 1963, when he said:

There are fields of governmental activity in which the federal Government could specify a broad range of programmes, the cost of which it would agree to share up to a maximum total contribution. Each province would then be free to decide the particular programmes in that broad range which it would implement and the federal Government would still have some control over the general purposes for which its funds are being employed.²³

* * * * *

At times the Department has found itself entering into relations with official agencies outside Canada, notably the U.S.A. Fire is no respecter of national boundaries; during the nineteenth and early twentieth centuries many cases occurred of serious conflagrations spreading across the international boundary between Canada and the United States. Since it is essential that all fires, regardless of their origin, should be brought under control as promptly as possible, it was natural that cooperation should develop between the fire-fighting forces of the border states affected. In 1954 the Ontario Department of Lands and Forests adopted a "memorandum of understanding" with the Minnesota Conservation Department and the U.S. Forest Service, to cover the protection of forests from fire along the international boundary between the State and the Province. The memorandum provided for a "common zone" extending for two miles on each side of the border and for the exchange of information and the taking of concerted measures between the protection agencies concerned. "Fires occurring on one side of the line and crossing to the other will be handled by the first party reaching it; the costs of suppressing such fires being met by the protection agency responsible for the area where the fire originated."²⁴

This memorandum, though possessing no legal or governmental status, was the first international agreement for forest fire control to be reached between the two countries. It has since been adopted by the Food and Agriculture Organization of the United Nations as a

model for similar understandings entered into between other countries, such as Mexico and the United States.

Also in the field of forest fire prevention fall the steps taken since 1962 to set up a North American Forestry Commission. The first meeting of this Commission took place in Mexico City, from July 24th-29th, 1961, with Canada's Deputy Minister of Forestry in the chair.²⁵ The meeting established working groups to review the international aspects of forest fire protection and forest insect and disease control. The chief of the Ontario Forest Protection Branch was one of the three Canadian representatives who were members of this group. The group met in Washington in 1962 and held detailed discussions on international fire-fighting agreements, fire control training, standards for reporting fire statistics, fire weather forecasting, fire danger measurements, problems of equipment and research. Tours were arranged in the countries already co-operating (Canada and the U.S.A.). Further meetings of the group were held in Mexico City in 1963 and Ottawa in 1965.

The Department has also been represented at two World Forestry congresses at Seattle, U.S.A., in 1960 and Madrid, Spain, in 1966; also at various Commonwealth forestry conferences and similar fish and wildlife conferences. In fact, such participation has been much more frequent than is usual for government departments in Canada below the national level. Furthermore several senior members of the staff have recently been assigned for limited periods to overseas activities under Canada's Programme of Foreign Aid (to Kenya in 1965-6-7 and Tanzania in 1967) or on loan to the Food and Agriculture Organization of the United Nations (Chile, 1963-65). Between 1959 and 1966 twenty-two "external aid students" from Venezuela, Trinidad, Dominica, Jamaica, Kenya and the United States visited Canada to receive technical training through the general diploma course of the Ontario Forest Ranger School.²⁶

These developments would seem to foreshadow a useful extension, in the coming years, of the Department's contacts and exchanges in the international sphere.

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R. S. L.
P. P.

NOTES AND REFERENCES

The following abbreviations have been used throughout the notes and bibliography:

AR	Annual Report of the Department of Lands and Forests	JLAO	Journals of the Legislative Assembly of Ontario
CCL	Commissioner of Crown Lands	JLAUC	Journals of the Legislative Assembly of Upper Canada
CHR	Canadian Historical Review	OA	Ontario Archives
CLD	Crown Lands Department	OHSPR	Ontario Historical Society Papers and Records
CSC	Consolidated Statutes of Canada	OLA	Ontario Legislative Assembly
CSAO	Civil Service Association of Ontario	OLS	Ontario Land Surveyor
CSFE	Canadian Society of Forestry Engineers	PAC	Public Archives of Canada
CTO	Crown Timber Office	RSO	Revised Statutes of Ontario
DLF	Department of Lands and Forests. The use of DLF-O (or LF-O) indicates a document is located in Operations Branch; DLF-T, in Timber Branch	RSUC	Revised Statutes of Upper Canada
IB	Information Bulletin	TC	Technical Circular
IC	Information Circular	TPL	Toronto Public Library
JLAC	Journals of the Legislative Assembly of Canada	U of T	University of Toronto

All references to statutes are to Statutes of Ontario unless otherwise noted.

Chapter 1: The Great Forest

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2. *Ibid.*, Vol. 2, pp. 30-31.
3. SIR GEORGE HEAD, *Forest Scenes and Incidents in the Wilds of North America*, (London, 1839) p. 252.
4. DAVID WILKIE, *Sketches of a Summer Trip, 1837*, p. 16.
5. SAMUEL THOMPSON, *Reminiscences of a Canadian Pioneer*, (Toronto, 1884), p. 48.
6. *Counsel for Emigrants*, (Aberdeen, 2nd ed., 1835), pp. 101-102.
7. RICHARD BONNYCASTLE, *The Canadas in 1841*, (London, 1842), Vol. 1, p. 120.
8. This and following paragraphs are based on D. PUTNAM, ET. AL. *Canadian Regions* (Toronto: Dent, 1963) and C. WHITTON, *A Hundred Years a-Fellin'* (Ottawa: Runge Press, 1943), ch. 1.
9. R. E. BALCH, *The Ecology of the Canadian*

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10. JOHN WHITE, *Sketches from America*, (London, 1870), pp. 167-168.
11. Catfish Creek Conservation Authority *Report*, Part II (Toronto, 1951), p. 37 and *Our Valley* (published by Conservation Authorities Branch, Dept. of Energy and Resources Management), Vol. 5, No. 1 (Winter, 1959) and Vol. 6, No. 1 (Winter, 1960), p. 13.
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16. BALCH, *op.cit.*
17. "How Should we Manage our Natural Forests", Fruit Growers' Association of Ontario, *Report*, 1883, pp. 290-296 at p. 293.
18. Royal Commission on Forest Reservation, *Report*, p. 10.

Chapter 2: Settlement of the Land

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2. G. C. PATERSON, "Land Settlement in Upper Canada, 1783-1840" (OA, *Report*, 1920), p. 22.
3. *Ibid.*, p. 59.
4. *Ibid.*, p. 63.
5. *Ibid.*, p. 114.
6. *Lord Durham's Report*, Sir. C. P. Lucas, ed. (1912), Vol. 3, App. B, Buller's "Report on Public Lands and Emigration", p. 59.
7. LILLIAN F. GATES, *The Land Policies of Upper Canada* (unpublished Ph.D. thesis, Radcliffe College, 1955), p. 507.
8. PATERSON, *op.cit.*, p. 153.
9. E. G. WAKEFIELD, *A Letter from Sydney*, App. "Outline of A System of Colonisation".
10. PATERSON, *op.cit.*, p. 145.
11. P. SHIREFF, *Tour of British North America* (1835), pp. 99, 101, 389-390.

12. PATERSON, *op.cit.*, p. 172.

13. *Ibid.*, p. 170.

14. LUCAS, *op.cit.*, Vol. 3, App. B. Compare it with the phrase used by John Richards in his 1830 Report to the Imperial Government on "Waste Lands and Emigration".

15. *Ibid.*, p. 60.

16. Under the Land Act of 1837.

Chapter 3: The Early Timber Trade

1. See "Instructions to Governor Murray" (Dec. 7, 1763) in OA, *Report*, 1906 (Toronto, 1907), p. 7ff. and "Instructions to Governor Carleton" (Jan. 3, 1775), *ibid.*, p. 58ff.
2. See Wentworth to Russell, Dec. 17, 1798, in E. A. CRUICKSHANK, *The Russell Papers* (Toronto: Ontario Historical Society, 1936), Vol. 3, p. 38. Christopher Robinson was the first to hold the position. After his death in 1798 Thomas Merritt was appointed and held the post until the British Government appointed Peter Robinson Surveyor General of Woods and Forests in 1827.
3. See A. R. M. LOWER, *The North American Assault on the Canadian Forest* (Toronto: Ryerson, 1938) ch. IX and his "The Trade in Square Timber" (U. of T., *Studies in History and Economics*, No. 6) and MICHAEL CROSS, "The Lumber Community of Upper Canada, 1815-1867", Ontario Historical Society, *Papers and Records*, Vol. LII, (1960), No. 4, pp. 213-233. GILBERT C. PATERSON'S "Land Settlement in Upper Canada", OA, *Report*, 1920, (Toronto, 1921) touches on the status of lumbering although his treatment of the administration of the timber trade is often unreliable.
4. The only documentary evidence that Merritt performed any function at all is a series of Timber Certificates dated 1817-1824 stating that he had not made reservations for masting timber in certain townships. OA, Crown Lands Papers, Shelf 57, No. 13. A draft exists of a Proclamation of Reservation, dated 1809, but we do not know whether it was put into effect. *Ibid.*, Shelf 57, No. 11.

- In 1804 Merritt wrote to his father: "I am doing very well. I have many appointments under the Government, the last is High Sheriff of this part of the country . . . I hold my half pay as Lieut. of Dragoons; Surveyor of Woods for the Province, Collector of the King's Rent on Crown and Clergy Reserves and the fines, etc. . . must yield me a sum of two thousand dollars per annum." Thomas Merritt to Capt. Nehemiah Merritt, 16 Sept., 1804. THOMAS MERRITT PAPERS, PAC.
5. See LOWER, *The North American Assault* and "The Trade in Square Timber", Cross, *op.cit.*, and W. E. GREENING, *The Ottawa* (Toronto: McClelland and Stewart, 1961) for a readable general account of the Ottawa trade.
 6. T. SOUTHWORTH and A. WHITE, *A History of Crown Timber Regulations from the Date of the French Occupation to the Year 1899* (Toronto: Clerk of Forestry, Report, 1899; DLF, Report, 1907; reprinted, DLF, 1957, with the 1907 pagination) at pp. 154-156. White later summarized much of the commentary in the history in "Systems of Administration of Timber Lands in Canada", Canadian Forestry Association, Annual Meeting, 1904, *Proceedings*, pp. 60-80.
 7. See "Proclamation" of May 3, 1826, in OA, Report, 1906, pp. 318-320.
 8. Robinson's instructions are reproduced in *JLAUC*, 1829, App. 2.
 9. House of Commons, Britain, Select Committee Appointed to consider Timber Duties, 1835, Report, App. 5.
 10. *Ibid.*
 11. *Ibid.*, and House of Lords, Select Committee on Timber Duty, 1820, Report. SOUTHWORTH and WHITE, *op.cit.*, (1957), p. 162, quote a letter from Gladstone to Cathcart, March 3, 1846, discussing the subject.
 12. "An Act for the better Regulation of the Lumber Trade", *Lower Canada Statutes*, 48 Geo. III, c.27 (1808) and SOUTHWORTH and WHITE, *op.cit.*, p. 167.
 13. "An Act to repeal certain Acts . . . and to regulate the Lumber Trade", *Lower Canada Statutes*, 59 Geo. III, c. 7 (1819) and SOUTHWORTH and WHITE, *op.cit.*, pp. 169-171.
 14. See generally LOWER and CROSS, *op.cit.*
 15. A. SAUNDERS, *Algonquin Story* (Toronto: DLF, 1963), pp. 33-35; Greening, *op.cit.*, Ch. VI. The stanza is from a ballad, *Hurry Up, Harry!* in the collection of Edith Fowke while the demise of Johnny Doyle is recorded in the song of that name in the book *Canada's Story in Song* (Toronto: Gage) by EDITH FOWKE, ALAN MILLS, and HELMUT BLUME.
 16. G. S. THOMPSON, *Up-to-Date, or The Life of a Lumberman* (Peterborough, Ontario, 1895), p. 20.
 17. *Ibid.*, p. 58.
 18. JOHN MACTAGGART dwells frequently and at length on lawlessness in the bush and in the communities along the Ottawa in his *Three Years in Canada: an Account of the Actual State of the Country in 1826-7-8* 2 vols. (London, 1829).
 19. SOUTHWORTH and WHITE, *op.cit.*, pp. 175-176.
 20. SOUTHWORTH and WHITE discuss the developments at the Ottawa office at some length but the best account is found in the *Report on the Public Departments* compiled by a Commission appointed by the Lieutenant Governor on the request of the Assembly in 1839. The *Report* is found in the *Sessional Papers* for the Thirteenth Parliament, Fifth Session (1840). On Shireff's appointment see especially pp. 305-306.
 21. *Ibid.*, pp. 305-306 and SOUTHWORTH and WHITE, *op.cit.*, p. 176.
 22. This practice was not entirely approved of by Commissioner Sullivan who reorganized the Bytown office, but he permitted it to continue, arguing that he felt sure that it was "of great advantage to the traders in Lumber." (*Report on the Public Departments*, p. 158). He also stated that "the money . . . is paid with greater punctuality than it would be under bonds to government, however well secured, as all the exactness with

respect to time usual in mercantile transactions is thereby secured." (*Ibid.*)

23. *Report on the Public Departments*, pp. 306-309.
24. *Ibid.*, p. 158. A permanent agent for Upper Canada had been appointed at Quebec in the latter years of the Shireff regime. Consequently Sullivan had little fear that dues would not be paid, since the great proportion of the timber had to pass through Quebec on its way to the British market.
25. P. SHIREFF, *Tour Through British North America*, (Edinburgh, 1835), p. 364.
26. J. LAWLOR, "Historical Sketch of Canada's Timber Industry" *Reprint from International Review of the Science and Practice of Agriculture*, Vol. VII, No. 9 (Sept., 1916), p. 4.
27. LOWER, "The Trade in Square Timber", p. 56.
28. *Report on the Public Departments*, p. 158.
29. See CROSS, *op.cit.*, p. 214 and LOWER, *The North American Assault*, which is generally useful on the subject.
30. *Report on the Affairs of British North America from the Earl of Durham*, App. B Imperial Blue Books, 1839.
10. *Ibid.*, p. 198.
11. See *ibid.*, p. 201-247 ("Office of the Surveyor-General of Lands"); PATERSON, *op.cit.*, pp. 168-169, 177-183.
12. "An Act to Provide for the Disposal of the Public Lands", 7 Wm. IV c. cxviii, *RSUC*, Vol. 1, pp. 860-866.
13. *Report on the Public Departments*, p. 218.
14. *Ibid.*, p. 234.
15. *Ibid.*, p. 233.
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17. *Ibid.*, p. 235-236.
18. *Ibid.*, p. 247.
19. *Minutes of Council, August 13, 1840*, quoted by PATERSON, *op.cit.*, p. 181-182.

Chapter 4: Beginnings of Administration

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2. G. C. PATERSON. "Land Settlement in Upper Canada, 1783-1840", OA, Report, 1920, p. 71.
3. *Ibid.*, p. 100.
4. *D. W. Smith Papers*, B 7 (TPL) quoted *ibid.*, p. 85.
5. *Minutes of Council, Land B*, p. 1 (Oct. 1, 1796) quoted in PATERSON, *op.cit.*, p. 87.
6. *Ibid.*, p. 103.
7. See generally *ibid.*, chapters 4 and 5.
8. *York Commercial Directory*, 1834.
9. "Report of the Commission of Inquiry into the Public Departments", *JLAUC*, 1839-1840, p. 196 (The "Report" is henceforth cited as *Report on the Public Departments*).
- Chapter 5: The Land Surveyor
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2. *Ibid.*, pp. 19-20.
3. Information supplied by Surveys Section, DLF.
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5. *Upper Canada Statutes*, 38 Geo. III, c.1, s.4.
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7. WEAVER, *op.cit.*, p. 10.
8. *Ibid.*, p. 11.
9. "Letter of Instructions to Walter Beatty dated Toronto, 18 June, 1870", *Instructions to Land Surveyors: Crown Surveys*, Vol. 7, September 26, 1860 to October 14, 1876, p. 242.
10. *Ibid.*
11. F. F. WHITSON, "The Surveyor, Past and Present, and the Future Prospects for him in Northern Ontario", Association of Ontario Land Surveyors, *Report*, 1909, p. 128.
12. *Ibid.*
13. WEAVER, *op.cit.*, p. 24.
14. *Ibid.*, p. 22 and File No. 2, "Historical Survey Instruments, Methods and Data", Surveys Section.
15. WEAVER, *op.cit.*, p. 23 and information supplied by Messrs. W. E. Carroll and A. Armstrong, Surveys Section, and John E.

- Jackson formerly of the Department of Highways.
16. WEAVER, *op.cit.*, p. 15.
 17. H. R. CUMMINGS, *Early Days in Haliburton*, (Toronto: DLF, 1963) p. 11.
 18. Extract from T. B. SPEIGHT, OLS, *Report upon the survey of certain meridian and base lines in the District of Algoma, etc., as made Under Crown Instructions, dated 2 May, 1910.*
 19. Extract from K. G. ROSS, OLS, *Report of the Survey of the 11th. base line, District of Patricia, 1920.*
 20. For details about James Dickson see Association of Ontario Land Surveyors, *Journal*, 1915, pp. 108-114.
 21. WEAVER, *op.cit.*, p. 19; AR, 1900, p. ix.
 22. WEAVER, *op.cit.*, pp. 4, 5.
 23. F. W. BEATTIE, "The Ontario-Manitoba Boundary", *Sylva*, Vol. 5, No. 1, p. 3.
 24. J. G. PIERCE, "Transit Bearing North", *Sylva*, Vol. 10, No. 1, p. 9.
- Chapter 6: Progress of Land Settlement
1. J. E. HODGETTS, *Pioneer Public Service* (Toronto: University of Toronto Press, 1956), p. 128.
 2. Scrip was an instrument used in negotiating land sales; mostly in emergencies. A person who served in the military would receive this instrument according to his service and could use it, more or less, for its determined cash equivalent in buying land. By the Land Act of 1860 land scrips were to be presented to the Commissioner of Crown Lands before January 1, 1862.
 3. Other colonization roads such as the Kennebec, Lambton and Temiscouata followed this pattern. See HELEN I. COWAN, *British Emigration to North America* (Toronto: University of Toronto Press, 1961), p. 183.
 4. H. M. MORRISON, "The Principles of Free Grants in the Land Act of 1841", *CHR*, Vol. XXXIII, p. 404.
 5. H. M. MORRISON, "The Background of the Free Land Homestead Law of 1872", *Canadian Historical Association Report* (1933), p. 58.
 6. For a review of land speculation in the 1850's see AR, 1856, pp. 52-56.
 7. A. F. Hunter, quoted in J. H. RICHARDS, "Lands and Policies: Attitudes and Controls in the Alienation of Lands in Ontario During the First Century of Settlement", *Ontario History*, Vol. L (1958), p. 201.
 8. J. SPELT, *Urban Development in South-Central Ontario* (Assen, The Netherlands: Van Gorcum, 1955), p. 95. See also J. W. KEENAN and G. A. HILLS, *Land-Use Plan for the Tweed Forest District* (Toronto: DLF, 1964), p. 16.
 9. Fuller descriptions of these roads are found in AR, 1863, pp. 98-102.
 10. CCL, *Report Book*, Vol. VIII, "Memorandum to the Commissioner of Crown Lands", January, 1863.
 11. R. L. JONES, *A History of Agriculture in Ontario 1613-1880* (Toronto: University of Toronto Press, 1946), p. 290.
 12. *Ibid.*, p. 163.
 13. Ontario Royal Commission on Forestry, *Report* (Toronto: Queen's Printer, 1947), pp. 8-9.
 14. G. W. SPRAGGE, "Colonization Roads in Canada West, 1850-1867" *Ontario History*, Vol. XLIX (1957), p. 17.
 15. Most of the following section on the troubled times of the Crown Land Agents is taken from AR, 1856, pp. 47-52.
 16. CLD, *Agents Letter Book, Canada West, F (1857-1861)*, letter of May 19, 1858, p. 237.
 17. CLD, *Letter Book, Simcoe Crown Land Agency*, letter to the CLD, May 30, 1861.
 18. *Ibid.*, letter of November 29, 1856.
 19. For a review of the squatter problem in timber administration see T. SOUTHWORTH and A. WHITE, *A History of Crown Timber Regulations* (1957 ed.).
 20. *Order in Council Book No. 16: 1916-1925* (Patents Office, DLF) p. 33. Memorandum dated November 1, 1916.
 21. H. M. MORRISON, "The Background of the

- Free Land Homestead Law of 1872", *Canadian Historical Association Report*, 1935, p. 64.
22. Figures taken from ARs for the respective years.
 23. See pamphlet *Emigration to the Province of Ontario, Canada* (Toronto: Department of Agriculture and Public Works, 1872).
 24. Ontario Royal Commission on the Agricultural Resources of the Province, *Report* (Toronto: 1881), p. 542.
 25. AR, 1894, p. vi.
 26. AR, 1898, p. vi.
 27. See 3 Edw. VII, c.4 and c.5 (1903).
 28. See "Memorandum by the Commissioner of Crown Lands to the Lieutenant-Governor in Council, October 17, 1902", *Woods and Forests Report Book III*, pp. 12-14.
- Chapter 7: The Department Takes Shape
1. *First Report of the Financial and Departmental Commission* (Quebec, 1863) Evidence.
 2. See J. E. HODGETTS, *Pioneer Public Service* (Toronto: University of Toronto Press, 1956).
 3. Department of Lands and Forests, *Statistical Reference of Lands and Forests Administration* (Toronto: DLF, 1964) p. 3.
 4. Woods and Forests, *Report Book I: 1851-1876*, Reports of May 31, 1852 (pp. 34-39) and July 24, 1852 (pp. 39-43).
 5. AR, 1856, pp. 86-89, HODGETTS, *op.cit.*, pp. 166-171.
 6. HODGETTS, *op.cit.*, Ch. VII and pp. 271-274.
 7. T. SOUTHWORTH and A. WHITE, *History of Crown Timber Regulations* (1957), p. 227.
 8. AR, 1856, App. pp. 2, 89.
 9. W. L. MORTON, *The Critical Years: the Union of British North America, 1857-1873*, (Toronto: McClelland & Stewart, 1965) pp. 34, 37.
 10. AR, 1856, pp. 30-36.
 11. *Ibid.*, p. 33.
 12. *Ibid.*, p. 38.
 13. *Ibid.*, p. 39.
 14. *Ibid.*
 15. *Ibid.*
 16. *Ibid.*, p. 46.
 17. Quoted by MORTON, *op.cit.*, p. 40.
 18. AR, 1856, p. 48.
 19. HODGETTS, *op.cit.*, p. 125.
 20. AR, 1856, p. 57.
 21. *Ibid.*, p. 64.
 22. *Ibid.*, pp. 65-77.
 23. *Ibid.*, p. 82.
 24. *Ibid.*, p. 83.
 25. *Upper Canada Statutes* 2 Geo. IV., c.10 (1821) and *Canada Statutes* 7 Vict., c.13 (1843).
 26. The Fisheries Act, 20 Vict., c.21 (1857).
 27. AR, 1856, p. 86.
 28. *Ibid.*, p. 89.
 29. AR, 1861, pp. 20, 21.
 30. HODGETTS, *op.cit.*, p. 51.
 31. *Canada Statutes*, 20 Vict., c.24 (1857).
 32. *Ibid.* See HODGETTS, *op.cit.*, pp. 91-94.
 33. AR, 1861, p. 20.
 34. HODGETTS, *op.cit.*, p. 157 and AR, 1867, App. pp. 5-7.
 35. *First Report of the Financial and Departmental Commission*, Evidence, Questions 405-408.
 36. *Ibid.*, p. 19.
 37. AR, 1865, p. xx.
 38. *Ibid.*, 1869, p. vii and 1870, p. vi.
 39. *Ibid.*, 1867, App. 1, p. 1.
 40. *Toronto Globe*, 1871, quoted in A. SHORTT and A. DOUGHTY (ed.) *Canada and Its Provinces* (Toronto, 1914) vol. xvii (Province of Ontario) p. 107.
 41. AR, 1869, p. vii and 1870, App. 9, p. 7.
 42. AR, 1872, p. ix; 1873, App. p. 51.
 43. See SHORTT and DOUGHTY, *op.cit.*, p. 129.
 44. *Ibid.*, pp. 143-144.
 45. J. W. BIGGAR, *Oliver Mowat* (Toronto, 1905) Vol. I, pp. 286-287.
 46. The Ontario Public Service Act, 41 Vict., c.21 (1878) s. 18.
 47. Both issues are discussed fully in J. W. BIGGAR, *op.cit.*, Vol. I, pp. 370-422, and in J. C. MORRISON's *Oliver Mowat and the Development of Provincial Rights in Ontario: A study in Dominion-Provincial Relations*,

1867-1896 (Ontario Department of Public Records and Archives, 1961), Chapter III, pp. 95-176 and Chapter IV, pp. 206-233.

48. MORRISON, *op.cit.*, p. 151.

49. *Ibid.*, pp. 206-207.

50. *Ibid.*, p. 210.

51. *Ibid.*, p. 214.

Chapter 8: Golden Age of Timber

1. "Instructions to James Stevenson, March 30, 1842, re: disposal of licenses to cut timber", *JLAC*, 1842, App. T.

2. See Canada, Legislative Assembly. Select Committee on the Lumber Trade. "First and Second Reports", *JLAC*, 1849, App. PPPP.

3. The depression of the 1840's is fully discussed in A. R. M. LOWER, *The North American Assault on the Canadian Forest* (Toronto: Ryerson, 1938), pp. 103-107. The Commissioner of Crown Lands, DCL-AR, 1856, p. 66, also discusses the depression and gives the following figures for shipments from Quebec: in 1845 there was a supply of 27,702,344 feet on hand to meet a demand for 24,223,000; in 1846 a supply of 37,000,643 feet for a demand of 24,242,689 feet; and in 1847 a supply of 44,027,253 feet for a demand of 19,060,880 feet. On the problem of uncertainty LOWER's *North American Assault* . . . and his "The Trade in Square Timber", in U. of T., *Studies in History and Economics, Contributions to Canadian Economics*, No. 6, and J. E. DEFEBAGH, *History of the Lumber Industry of America* (Chicago: The American Lumberman, 1906) give good accounts of the development of the trade.

4. See T. SOUTHWORTH and A. WHITE, *A History of Crown Timber Regulations* (Toronto: DLF, 1957), p. 192 ff. The 1842 "Instructions" are also found here at p. 190.

5. LOWER, *The North American Assault* . . . , p. 104.

6. M. CROSS, "The Lumber Community of Upper Canada, 1815-1867", *OHSPR*, LII (1960), p. 217.

7. *Ibid.*, p. 223.

8. *JLAC*, 1849, App. PPPP, evidence of March 15, 1849.

9. AR, 1856, p. 64.

10. Canada Statutes, 12 Vic., c.30 (c.23). After Confederation the Act remained in force until 1877, when it became, with few alterations, R.S.O., c.26. It was retained virtually unchanged in R.S.O., 1887, c.28, and R.S.O., 1897, c.32. The 1849 Act is reproduced in full in SOUTHWORTH and WHITE, *op.cit.*, pp. 201-204.

11. See Chap. 7, p. 112.

12. Regulations under the Act were first issued on Sept. 5, 1849 (SOUTHWORTH and WHITE, *op.cit.*, p. 205-208) and March 15, 1850 (Canada Gazette, March 23, 1850 and Ontario Archives, Crown Lands Papers, *Regulations and Memoranda, 1889*). A complete discussion of all the changes in the regulations to 1900 will not be attempted in this chapter. However, as many as possible have been traced and can be located by referring to P. PROSS, *Regulations passed under Crown Timber Acts, 1849-1900*, O.A.

13. See, for example, Select Committee to examine and report upon the present system of management of the Public Lands, *Report; JLAC*, 1854-1855, App. MM.

14. An excellent description of this practice, and others, is given in a letter to the Commissioner of Crown Lands from the Crown Timber Agent at Bytown. See Crown Timber Office (C.T.O.), Bytown, *Letters to Commissioner*, Vol. V, p. 31. Letter of June 12, 1852.

15. The assessment of SOUTHWORTH and WHITE, *op.cit.*, p. 208-209.

16. *Woods and Forests Branch: Report Book I: 1851-1876*, Report dated March 26, 1852, pp. 11-20 at p. 14 citing correspondence to this effect dated April 30, 1850.

17. *Woods and Forests Branch: Orders in Council, 1847-1867*, Order of May 15, 1851, p. 5.

18. C.T.O., Ottawa, *Letters to Commissioner*, Vol. V, p. 11. Letter of April 23, 1851.

19. Order-in-Council, 8 August, 1851. (SOUTHWORTH and WHITE, *op.cit.*, p. 209-213; Crown Lands Papers, *Regulations and Memoranda 1889*).
20. See Letter of April 23, 1851 (see above fn. 18).
21. AR, 1856, p. 70.
22. *Woods and Forests Branch: Orders in Council, 1847-1867*, p. 5, Order of May 15, 1851.
23. AR, 1856, pp. 70-74.
24. *Woods and Forests Branch: Orders in Council, 1847-1867*, p. 93, Order of Feb. 13, 1857; An informative letter on the accounting procedure used in the Ottawa agency is to be found in the *Letters to Commissioner*, Vol. V, p. 42, Sept. 15, 1852.
25. See *Woods and Forests Branch: Report Book I: 1851-1876*, p. 385.
26. See *ibid.*, pp. 34-39 Report of May 31, 1852, and *Orders in Council: 1847-1867*, pp. 7-8, Order of June 4, 1852.
27. *Ibid.*
28. AR, 1856, p. 59.
29. *Woods and Forests Branch: Report Book I, 1851-1876*, p. 116, Report of Jan. 31, 1854.
30. *Woods and Forests: Orders in Council, 1847-1867*, pp. 57-58, Order of April 7, 1854.
31. AR, 1856, p. 60 and *Woods and Forests: Report Book I*, p. 124, Report of April 13, 1854.
32. *Woods and Forests: Orders in Council, 1847-1867*, Orders of May 6, 1854, (p. 60); Oct. 13, 1854 (p. 64) and June 16, 1855 (p. 76).
33. *Ibid.*, p. 111, Order of April 16, 1858.
34. *Woods and Forests: Report Book I*, pp. 440-441, Report of August 6, 1864.
35. These were: Ottawa, Pembroke (1897), Sault Ste. Marie (1883), Webbwood (1895), Thunder Bay (1882) and Rat Portage (1889).
36. *Woods and Forests: Report Book I*, pp. 146-147, Report of August 14, 1854.
37. Trespass problems frequently came before the Executive Council and the Commissioner of Crown Lands. A letter from the Ottawa agent gives the most succinct description of the forms trespass was most likely to take, though it is by no means a complete list (*Letters to Commissioner*, Vol. VI, pp. 327-330, Letter of Dec. 27, 1860). A Report of 1860 deals with the problem of controlling the Lakes and the various weaknesses in the Regulations (*Woods and Forests: Report Book I*, p. 385). Other instances are found *ibid.*, p. 1 (1851); *Woods and Forests: Orders in Council, 1868-1901*, pp. 14-16 (Oct. 15, 1869); *ibid.*, p. 22-23 (Dec. 2, 1870); *Woods and Forests: Report Book II, 1877-1901*, pp. 149-151 (Oct. 13, 1891); *ibid.*, p. 361-362 (May 21, 1900); *ibid.*, pp. 472-474 (May 16, 1901). The problem is discussed DCL, AR, 1860, pp. 11-14. Lack of control in remote regions is discussed in a report of Jan. 2, 1879 (*Report Book II*, pp. 19-22). Difficulties with a prominent lumbering family, the Scotts, eventually led to a Royal Commission inquiry in 1874 (see *Report Book I*, pp. 578 ff. and CLP: *Commissioners re inquiry into W. A. Scott's defrauding the government of timber, June, 1874: Minutes of Meetings*). Unfortunately the commission's report has not been found.
38. See C.T.O. Ottawa, *Letters to Commissioner*, V., p. 31, Letter of June 12, 1852.
39. *Ibid.*, VI, Letter of June 4, 1860 (pp. 269-272) and letter of March 5, 1862 (p. 474).
40. *Woods and Forests Branch: Orders in Council, 1847-1867*, pp. 146, 149, Orders of May 29, 1860 and June 23, 1860.
41. The regulations of June 13, 1866 superseded those of 1851 (see SOUTHWORTH and WHITE, *op.cit.*, p. 234), and were amended by the regulations of April, 1869 (*ibid.*, p. 244).
42. The "Instructions" of 1842 had provided that when application for a limit was made by someone other than the incumbent holder, the application was to be suspended until the 1st of August, unless the incumbent should come forward and request a renewal. If this happened, the Agent could dismiss the first application or offer the limit at public

- sale. The March 1850 regulations changed this procedure, authorizing the agent to divide the limit or award it by lot. A year later, however, it was decided that where the cost of surveys rendered it advisable, preference for licenses might be disposed of by auction with an upset price fixed by the Commissioner of Crown Lands (Regulations of August 8, 1851).
43. See C.T.O., Ottawa, *Letters to Commissioner*, Vol. VI, pp. 269-272, Letter of June 4, 1860.
 44. The upset price was meant to be kept secret and aroused intense interest on the part of the lumbermen. Detailed information on the terms of sale, the purchasers of limits, amounts paid, forfeitures and changes of ownership will be found in the *Timber Sale Books* and the Commissioner's and Assistant Commissioner's *Sale Books*. The latter frequently contain notations on upset prices.
 45. Regulations, April, 1869, ss. 13, 14, 15.
 46. *Woods and Forests: Orders in Council, 1868-1901*, p. 109, Order of April 27, 1887.
 47. Lumberman's Association of Ontario, *Minute Book*, p. 100 ff. See also JOHN CHARLTON, *Diary*, Vol. 3, Nov. 17, 1887-Mar. 28, 1889, entries for Dec. 14, 15.
 48. Lumberman's Association, *Minute Book*, p. 103.
 49. *Ibid.*, p. 120.
 50. *Ibid.*, p. 121, *Timber Sale Books: Sale of 1887*, *ibid.*, 1890.
 51. A. R. M. LOWER, *The North American Assault*, pp. 153-159 discusses American tariff policy from the Canadian point of view, while J. E. DEFEBAGH, *op.cit.*, vol. I, Ch XXIX, presents the American side of the argument.
 52. This account of the crisis is taken from the Lumberman's Association of Ontario, *Minute Book*, p. 181. Records of various meetings during the crisis follow from p. 148. Not all lumbermen approved, however. See JOHN CHARLTON, *Diary*, "Summary of Events . . . 1899".
 53. AR, 1856, p. 230. The estimate is slightly distorted since the figures for the Lower and Upper Ottawa Agencies cover the Quebec and Ontario sides.
 54. AR, 1894, p. viii.
 55. LOWER, *North American Assault*, p. 51. The figure is for 1903.
 56. *Ibid.*, p. 154. "The Jones Boys" is from E. FOWKE, A. MILLS, H. BLUME, *Canada's Story in Song* (Toronto: Gage).
 57. AR, 1856, p. 76.
 58. *Ibid.*, p. 64.
- Chapter 9: The Ferment of New Ideas
1. "An Act for the Preservation of Salmon" *Upper Canada Statutes* 47 Geo. III, c.12 (1807); "An Act to . . . make further provisions respecting the fisheries . . ." *ibid.*, 2 Geo. IV, c.10, (1821); "An act for the preservation of deer . . ." *ibid.*, 2 Geo. IV, c.17 (1821); "An act to amend [2 Geo. IV, c.17] . . . and to prohibit Hunting and Shooting on the Lord's Day", *ibid.*, 2 Vict., c.12 (1839); "An act to alter and amend the Game Laws of Upper Canada" *Statutes of Canada*, 19-20 Vict., c.94 (1856); "The Fishery Act", *ibid.*, 20 Vict., c.21 (1857) and "The Fishery Act", *ibid.*, 22 Vict., c.86 (1858). See also J. E. HODGETTS, *Pioneer Public Service* (Toronto: University of Toronto Press, 1956).
 2. AR, 1860, App., pp. 160, 161. The day to day trials and tribulations of a Fisheries Overseer are well documented in the papers of John and Frederick Kerr (U. of T.) chiefly in a highly detailed diary-cum-letterbook. The papers run from 1860 to 1898.
 3. AR, 1859, App. pp. 77-82.
 4. AR, 1863, App. p. 50. See also A. F. HUNTER, *History of Simcoe County*, Toronto, 1909. Vol. 1, p. 48.
 5. AR, 1859, App. p. 84.
 6. Att.-Genl. Canada v Att.-Genl. Ont., 1898, A.C., 700.
 7. See Ontario Game and Fish Commission, *Report*, 1892, pp. 472-473, and Ch. 21, below.
 8. *Journal of Sciences and Arts*, 1847, Vol. 4, pp. 161-170.

9. Select Committee on the Lumber Trade, 'Second Report', *JLAC*, App. PPPP, and SOUTHWORTH and WHITE, *History of the Crown Timber Regulations* (1957 ed.), p. 199.
10. Select Committee on the System of Management of the Public Lands, "Evidence", *JLAC*, 1854-1855, App. MM, Letter of A. T. Galt, March 7, 1855 and SOUTHWORTH and WHITE, *op.cit.*, p. 219.
11. Select Committee, 1854-1855, "Statement by Mr. Spragge . . . shewing the comparative cost of managing the Public Domain . . .", March 23, 1855.
12. *Ibid.*, Evidence of W. H. Burke.
13. *Ibid.*, Evidence of A. J. Russell.
14. *Ibid.*, Evidence of W. H. Burke.
15. *Ibid.*, Evidence of A. J. Russell, Question 14.
16. Select Committee appointed to enquire into and report on the State of the Lumber Trade, "Report", *JLAC*, 1863, App. No. 8.
17. AR, 1859, pp. 10-11.
18. The earlier efforts of Partridge together with his report to Campbell and the latter's response are dealt with by SOUTHWORTH and WHITE, *op.cit.*, pp. 269-270.
19. AR, 1867, App. p. 1. Partridge's dismissal is described in a series of memoranda in Woods and Forests, *Report Book I, 1851-1876*, pp. 443-462.
20. A. KIRKWOOD, *Papers and Reports upon Forestry, Forest Schools, Forest Administration and Management* (Toronto, 1893), p. 205 and Patents Office, *Report Book I*, p. 26 "Memo of Statutes . . . and Orders for the General Management of the Department", Exhibit 31.
21. GEORGE P. MARSH, *Man and Nature*, ed. by D. Lowenthal, (Cambridge, Mass.: Harvard University Press, 1965).
22. A. SHORTT and A. DOUGHTY (ed.) *Canada and Its Provinces* (Toronto, 1914) vol. xvii (Province of Ontario), pp. 143-144.
23. *Canadian Monthly*, June, 1872, p. 527.
24. "An Act to encourage the Planting of Trees along Highways", 34 Vict., c.31 (1871) and SOUTHWORTH and WHITE, *op.cit.*, p. 279.
25. See ARs for the period.
26. AR, 1879, p. x.
27. *Ibid.*, p. xii.
28. *The Lumber Trade of the Ottawa Valley* (3rd. ed., Ottawa, 1872), p. 47.
29. A. D. RODGERS, *Bernhard Eduard Fernow* (Princeton, N.J.: Princeton University Press, 1951) pp. 37, 38, 39.
30. A. P. LESLIE, *Large Forest Fires in Ontario* (Toronto: DLF, mss., 1954) p. 7.
31. "An Act respecting the clearing of Lands and the protection of Forests against Fires", *Quebec Statutes*, 34 Vict., c.19 (1870).
32. AR, 1879, p. xi.
33. "An Act to preserve the Forests from destruction by Fire", 41 Vict., c.23 (1878).
34. *Toronto Globe*, January 31, 1878.
35. RODGERS, *op.cit.*, p. 39. Only one other North American statute enacted prior to 1878 goes as far as the Ontario Act. This was an Iowa Fire Act of February 16, 1843 (*Rev. Stat. Iowa*, 1843, c.121, p. 501) which authorized boards of county commissioners to set up fire districts and appoint a fire warden in each. See J. P. Kinney, *The Development of Forest Law in America* (N.Y.: Wiley, 1917), p. 25.
36. Fruit Growers' Association of Ontario, "Report", 1879, App. D, Commissioner of Agriculture and Arts, *Report*, 1879, pp. 279, 324-325.
37. RODGERS, *op.cit.*, pp. 51 ff and Fruit Growers' Association of Ontario "Report", 1882, Commissioner of Agriculture and Arts, *Report*, 1882.
38. *Ibid.*
39. RODGERS, *op.cit.*, p. 64.
40. *Ibid.*, p. 77 and Ontario Fruit Growers' Association "Report", 1883, pp. 264-270.
41. AR, 1882, p. viii.
42. SOUTHWORTH and WHITE, *op.cit.*, pp. 273-276.
43. *Ibid.*, pp. 277-278.
44. J. W. B. SISAM, *Forestry Education at Toronto* (Toronto: University of Toronto Press,

- 1961), pp. 7-8 and Clerk of Forestry, *Reports*, for the period.
45. Phipps' description of this tour, originally printed in Clerk of Forestry, *Report*, 1884, has recently been re-printed as "Across the Watershed of Eastern Ontario", *Forest History*, Vol. 9 (1965) No. 3, pp. 2-8.
 46. A. KIRKWOOD, *Algonkin Forest and Park, Ontario, Letter to the Honourable T. B. Pardee, M.P.P. Commissioner of Crown Lands for Ontario* (Toronto, 1886).
 47. A. SAUNDERS, *Algonquin Story* (Toronto: DLF, 1963) pp. 82 ff.
 48. Royal Commission on Forest Reservations and National Park, *Report*, 1893, (Toronto, 1893, Reprinted, Toronto: DLF, 1950 and 1956) p. 9.
 49. *Ibid.*, p. 10.
 50. *Ibid.*, p. 10-12.
 51. *Ibid.*, p. 20-21.
 52. *Ibid.*, p. 22.
 53. *Ibid.*, p. 13.
 54. "The Algonquin National Park Act", 56 Vict., c.8 (1893).
- Chapter 10: The Rise of Forestry
1. Ontario Fruit Growers' Association, "Report", 1880, in Commissioner of Agriculture and Arts, *Report*, 1880, p. 146.
 2. See SOUTHWORTH and WHITE, *History of the Crown Timber Regulations* (1957 ed.), pp. 224, 231, and 240-242; Select Committee on the System of Management of the Public Lands, *JLAC*, 1854-55, App. MM, and Select Committee appointed to enquire into and report on the state of the Lumber Trade, "Report", *JLAC*, 1863, App. No. 8.
 3. AR, 1865, pp. xxi-xxii.
 4. AR, 1879, pp. x-xii.
 5. For a preliminary list of the topics of these papers, see American Forestry Congress, *Proceedings*, 1, (1882), (Washington, 1883) pp. 8-12, and "Report of Delegation appointed to attend the American Forestry Congress" in Fruit Growers' Association of Ontario, "Report", 1882, in Commissioner of Agriculture and Arts, *Report*, 1882. (Hereafter cited as *Congress*.)
 6. See reports of papers in *ibid.*, especially HON. D. H. BAILEY, "Droughts, Floods and Famine in China" (pp. 44-45); DR. DAN MILLIKEN "Forests and Health" (pp. 46-51); DR. A. EBY, "Why should we plant Trees?" (pp. 51-3); and CASSIUS M. CLAY, "Preservation of Forests" (pp. 54-8).
 7. See reports of JAMES LITTLE, "The White Pine Forests of Canada" and J. K. WARD "Forest Fires", in *ibid.*, pp. 42-4.
 8. B. E. FERNOW habitually did this, See *ibid.*, "Conditions of Forest Growth" (pp. 70-79) and A. D. RODGERS, *Bernhard Eduard Fernow*, (Princeton, N.J.: Princeton University Press, 1951) p. 526.
 9. *Congress*, p. 21.
 10. *Ibid.*, pp. 138-139 and JOHN DOUGALL, "The Preservation of Forests from Wanton Destruction and Tree Planting", *ibid.*, pp. 67-70.
 11. *Ibid.*, pp. 138-139. Also paper of J. K. WARD, *op.cit.*
 12. *Ibid.*, e.g. p. 43 (J. K. WARD, *op.cit.*).
 13. *Ibid.*, pp. 138-139.
 14. *Ibid.*, see J. S. FAY, "Experiments in Tree Planting on Cape Cod" (p. 88); H. RENICK, "Encouragement of Tree Planting By Law" (p. 90); and T. BEALL, "The Growth of Black Walnut in Ontario" (pp. 90-92); etc.
 15. *Ibid.*, pp. 138-139, and V. M. SPALDING, "Forestry in Michigan", p. 104.
 16. Fernow's phrase for the cutting restriction mentioned above. See his article on "Forest Resources and Forestry" in A. SHORTT and A. DOUGHTY, *Canada and its Provinces* (Toronto, 1914) Vol. 18, (Province of Ontario) pp. 585-599.
 17. See delegates' conclusions *Congress*, pp. 138-139; especially recommendations 10, 13, and 15.
 18. See B. E. FERNOW, "Conditions of Forest Growth" in H. CLEPPER and A. B. MEYERS (eds.), *American Forestry: Six Decades of Growth* (Washington: Society of American Foresters, 1960) pp. 4-8. In 1905 the United

- States National Forest Service was inaugurated. In 1909 the Federal Commission of Conservation, instigator of much of the early basic work in Canadian Forestry, was established.
20. Stewart's description of this event is found in Canadian Forestry Association, *Report*, 1904, p. 108.
 21. Information about Phipps, and quotation from a poem signed "P.C.M.", obtained from a relative (T. Mackey).
 22. "The Ontario Tree Planting Act", 46 Vict., c.26 (1883).
 23. See Ontario Clerk of Forestry, *Report*, 1896, p. 42.
 24. *Ibid.*, 1885, p. 7.
 25. *Ibid.*
 26. See *ibid.*, 1891 pp. 67-72 for the text of a particularly purple speech by Phipps to the students of Upper Canada College.
 27. *Ibid.*, 1884, p. 116.
 28. *Ibid.*, 1886, p. 70. He urged that the area suggested by Kirkwood for such a "reservation" was far too small and that at least one million acres should be reserved, while they were still available.
 29. *Ibid.*, 1896, p. 5.
 30. *Methodist Witness*, quoted in MORGAN, *Canadian Men and Women of the Times*, (1912).
 31. See e.g., *ibid.*, 1898, p. 8.
 32. *Ibid.*, 1896, pp. 41-52.
 33. "The Tree Planting Act", 59 Vict., c.60 (1896).
 34. *Ibid.*, 1897, pp. 7-9.
 35. See Royal Commission on Forestry Protection, *Report* (Toronto, 1900).
 36. 61 Vict., c.10 (1898).
 37. Ontario Clerk of Forestry, *Report*, 1899, p. 13 and pp. 10-15; 1904, pp. 8-10, 13-16.
 38. *Reports*, 1903, p. 12; 1899, p. 13; 1900-1901, p. 10.
 39. B. E. Fernow, in SHORTT and DOUGHTY, *op.cit.*, p. 597.
 40. Ontario, Director of Forestry, *Report*, 1900-1901, p. 3 ff.
 41. A. D. RODGERS, *op.cit.*, pp. 387-388, and B. E. FERNOW, *Lectures on Forestry* (Kingston, 1903. Reprinted, Toronto: DLF, 1957).
 42. *Ibid.*, p. 389.
 43. Bureau of Forestry, *Report*, 1904, pp. 17-18.
 44. He and Aubrey White were official Ontario delegates to the founding conference in Ottawa.
 45. RODGERS, *op.cit.*, p. 398.
 46. *Ibid.*, pp. 393-396 and *Report of Canadian Forestry Convention* bound with Canadian Forestry Association, *Report*, 1906.
 47. From information given by J. A. Brodie.
 48. RODGERS, *op.cit.*, p. 398.
 49. The School's history is recorded in J. W. B. SISAM, *Forestry Education at Toronto* (Toronto: University of Toronto Press, 1961).
 50. See FERNOW's *Economics of Forestry*, (4th ed., N.Y.: Crowell, 1902) Ch. IX.
 51. RODGERS, *op.cit.*, p. 597.
 52. *Ibid.*, p. 462.
 53. E. J. ZAVITZ, *Recollections 1875-1964* (Toronto: DLF, 1965), *passim*.
 54. See the SCHINDLER-JAMES *Interview with E.C. Drury*, pp. 5-6, and PROFESSOR W. BROWN's paper at the 1882 Congress: "Forest and Rainfall in Ontario", *Congress*, pp. 37-41.
 55. Ontario Department of Agriculture, *Report*, 1906, p. 195.
 56. *Ibid.*, pp. 196-200.
 57. *Ibid.*, p. 200.
 58. E. J. ZAVITZ, *Recollections 1875-1964*, pp. 5-6.
 59. Most readily available in Ontario Department of Agriculture *Report*, 1908, (Toronto, 1909) vol. II and E. J. ZAVITZ, *Fifty Years of Reforestation in Ontario* (Toronto: DLF, n.d.).
 60. ZAVITZ, *Recollections*, p. 6.
 61. *Ibid.*, p. 7.
 62. *Ibid.*, p. 8.
 63. *Ibid.*
 64. A. D. RODGERS, *op.cit.*, p. 523.
 65. ZAVITZ, *Recollections*, p. 10.
 66. For all three of these, see A. H. RICHARDSON, *Forestry in Ontario* (Toronto: Ontario De-

- partment of Forestry, 1928). A decision on priorities was being made. In effect, these men decided, or had no choice, politically, but to decide, to forego for the moment any real following-up of timber management ideas. In setting up a separate organization for forestry, they cut the foresters off from the Department's timber administration.
67. See SISAM, *op.cit.*, App. VII, p. 106-111.
 68. E. C. DRURY interviewed by J. JAMES and R. S. LAMBERT, Oct. 9, 1965.
 69. Timber Commission (Ontario) 1920, *Report* (Toronto: King's Printer, 1922).
 70. E. J. ZAVITZ interviewed by R. S. LAMBERT, R. N. JOHNSTON, C. R. MILLS, October 4, 1965.
 71. Opinion of J. A. Brodie.
 72. 1 Geo. V, c.74 (1911). See generally the AR's for the period and A. H. RICHARDSON, *Forestry in Ontario*, (Toronto: Dept. of Forestry, 1928).
 73. AR, 1944, p. 87.
 74. J. F. SHARPE and J. A. BRODIE, *The Forest Resources of Ontario*, (Toronto: Dept. of Forestry, 1930), the AR's for the period and R. N. JOHNSTON and J. F. SHARPE, *Report of James Bay Forest Survey* (Toronto: King's Printer, 1923).
 75. Thus, although the Kirkwood forest was in the Sault Ste. Marie District, it was managed, at first at least, by J. F. Simmons from Toronto.
 76. See AR's 1919-1929, Forestry Branch Report.
 77. AR, 1927-28, pp. 110-112.
 78. AR, 1926, p. 7.
 79. 17 Geo. V, c.12 (1927).
 80. 19 Geo. V, c.14 (1929).
 81. 19 Geo. V, c. 13 (1929).
 82. J. A. Brodie's phrase.
 83. See the Minute Books of the Forestry Board, in the possession of C. R. Mills.
- Chapter 11: Protecting the Forest
1. ROBERT BELL, *Geographical Distribution of Forest Trees in Canada* (Toronto, 1897), p. 294.
 2. A. P. LESLIE, *Large Forest Fires in Ontario*, (Toronto: DLF, mss., 1954).
 3. See Surveyor's *Reports* on their base line from Michipicoten to the Montreal River, 1867.
 4. W. T. FOSTER and K. B. TURNER, *Forest Protection in Ontario* reprinted from *Canadian Geographical Journal*, February, 1960 by Ontario DLF, Feb. 1960, p. 7.
 5. 41 Vict., c.23 (1878).
 6. T. SOUTHWORTH and A. WHITE, *A History of Crown Timber Regulations from the Date of the French Occupation to the Year 1899*, (1957), pp. 273-276.
 7. AR, 1887, pp. vi-vii.
 8. AR, 1896, p. viii.
 9. 63 Vict., c.45, (1900).
 10. See C. D. HOWE and J. H. WHITE, *Trent Watershed Survey*, Canada, Commission of Conservation, (Toronto, 1913). p. 34.
 11. AR, 1901, p. xiv.
 12. *Ibid.*
 13. *Ibid* and Royal Commission on Forestry Protection in Ontario, *Report*, 1899, (Toronto, 1900, p. 20.
 14. AR, 1905, p. 7.
 15. FOSTER and TURNER, *op.cit.*, p. 7.
 16. E. J. ZAVITZ, *Recollections 1875-1964* (Toronto DLF, 1964), p. 10.
 17. Canada, Commission of Conservation, *Forest Protection in Canada 1913-1914* (Toronto, 1915) p. 1.
 18. 3-4 Geo. V, c.64 (1913).
 19. AR, 1915, p. xi.
 20. *Ibid.*, p. ix.
 21. ZAVITZ, *op.cit.*, p. 12.
 22. LESLIE, *op.cit.*, p. 9-10.
 23. 7 Geo. V, c.54 (1917).
 24. (Ontario) Commission to Investigate and Report upon the Accuracy or Otherwise of All Returns made Pursuant to the Crown Timber Act, Section 14, by any holder of a Timber License, *Report*, (Toronto: King's Printer, 1922. Reprinted Toronto: DLF, 1965).
 25. AR, 1922-23, p. 14.

26. H. RUSSELL interviewed by R. S. LAMBERT and P. PROSS, Kapuskasing, August, 1965.
27. AR, 1922-23, p. 14.
28. 14 Geo. V, c.71 (1924).
29. 17 Geo. V, c.25 (1927).
30. 20 Geo. V, c.60 (1930).
31. AR, 1931, p. 119.
32. AR, 1937, p. 81.
33. Inquiry into the Ontario Provincial Air Service, 1934, *Proceedings*.
34. AR, 1936, pp. 88-91.
35. LESLIE, *op.cit.*, p. 11.
36. See Chapter 17 regarding a discussion of the Select Committee of the Legislative Assembly appointed to enquire into the administration of the Department of Lands and Forests, 1939. Both the Majority and Minority reports were issued in 1941.
37. 10 Geo. VI, c.32 (1946).
38. 7-8 Eliz. II, c.38 (1959).
39. Ontario, Royal Commission on Forestry, *Report*, (Toronto: King's Printer, 1947), *passim*.
40. AR, 1950, p. 46.
41. *Mississagi Salvage Project: Interim Report as of March 30, 1954* (Toronto: DLF, mimeo, 1954).
42. AR, 1955, s.4, p. 1.
43. Ontario Agricultural Commission, *Report*, 1881, p. 197.
44. "Insectivorous Birds Act", *Canada Statutes*, 27-28 Vict., c.52 (1864).
45. Fruit Growers' Association of Ontario, "Report," 1882, Commissioner of Agriculture and the Arts, *Report*, 1882, App. C, p. 138.
46. G. J. SPENCER, "A Century of Entomology in Canada", *The Canadian Entomologist* 96 (1964), Nos. 1 and 2, pp. 33-59 at pp. 39-41. See also ROBERT GLEN, "Entomology in Canada up to 1956. A Review of Developments and Accomplishments", *ibid.*, 88 (1956) No. 7, pp. 296-371, and K. TURNER, *A History of Investigations into and Control of Pests of Forest Trees in Ontario* (Toronto: DLF, mss., 1965).
47. C. G. HEWITT, "Insects Destructive to Canadian Pests", Canada Commission of Conservation, *Report*, 1910, pp. 142-151.
48. *Canada Statutes* 9-10 Edw. VII, c.31.
49. AR, 1921, p. 257.
50. AR, 1940, p. 132.
51. AR, 1929, pp. 117, 126, 151.
52. AR, 1930, p. 140.
53. B. M. MCGUGAN and H. C. COPPEL, *Biological Control of Forest Insects* (Commonwealth Agricultural Bureaux, 1962) pp. 109-115.
54. GLEN, *op.cit.*, p. 355 and K. E. STEWART interviewed by K. TURNER, September, 1965.
55. *Transcript of Special Meeting on Spruce Budworm, Toronto, December 15, 1943* (Toronto: DLF, mimeo, 1943).
56. "Forest Spraying and Some Effects of DDT", *DLF: Biological Bulletin*, No. 2 (1949) and TURNER, *A History* . . .
57. S. C. KENDEIGH, "Bird Population Studies in the Coniferous Forest Biome During a Spruce Budworm Epidemic", *DLF: Biological Bulletin*, No. 1 (1947).
58. Forest Protection Branch (FPB), File 9-1-3 (Entomology Work Program) and TURNER, *A History* . . . , pp. 30-31.
59. FPB, File 9-1-1 (Correspondence).
60. FPB, File 9-1-3 and 9-1-4 (District Reports).
61. *Ibid.*, and 9-2-3 (Pathology).
62. AR, 1943, p. 78 and IC 151, March, 1942.
63. FPB, File 9-1-1, Vol. 1, "Agreement between Canada (Dept. of Agriculture) and Ontario (DLF)", Signed April 28, 1945.
64. FPB, File "Construction of the Sault Ste. Marie Laboratory".
65. FPB, File 9-1-1, "Agreement between Canada (Dept. of Agriculture) and Ontario (DLF) Regarding research in forest entomology", Signed Sept. 30, 1952. The "Agreement . . . re forest pathology", had been signed July 5, 1949. A further "Agreement between Canada (Dept. of Northern Affairs and National Resources) and Ontario (DLF) re Research in Silviculture and Fire Protection" was signed January 29, 1959. The creation of the Department of Forestry

- (Canada) necessitated a new agreement combining all previous contracts. See "Agreement . . . re forest research", Signed Jan. 31, 1963.
66. FPB, File 9-1-3; 9-1-1, Vol. 1 and TURNER, *A History . . .*, p. 38.
 67. FPB, File "Construction of the Sault Ste. Marie Laboratory".
 68. J. S. BOYCE, *Forest Pathology* (New York: McGraw-Hill, 1938) p. 2 and TURNER, *A History . . .*, p. 40.
 69. H. T. GUSSEW, "Diseases of Forest Trees", Canada Commission of Conservation, *Report*, 1910, pp. 135-142.
 70. TURNER, *A History . . .*, p. 41.
 71. *Ibid.*, and AR, 1914, p. 94.
 72. W. A. MCCUBBIN, "The White Pine Blister Rust in Canada", Fruit Growers' Association of Ontario, *Report*, 1916, pp. 81-86.
 73. AR, 1917, pp. 155-158.
 74. TURNER, *A History . . .*, pp. 39 ff. *passim.*; FPB, File 9-2-4, (District Reports on Pathology) and W. R. HADDOW and J. G. K. MCEWAN, *Blister Rust Control Project in Galway Township, Lindsay Forest District, Sept. 1954*, (Toronto: DLF, mss, 1954).
 75. AR, 1918-1925 inc.
 76. AR, 1930, p. 141.
 77. See BOYCE, *op.cit.*, and Canada Dept. of Agriculture, *Dutch Elm Disease* (Ottawa: Queen's Printer (Can. Dept. of Agriculture Publication 1010), 1958).
 78. See above, note 63.
 79. RACHEL CARSON, *Silent Spring* (Boston: Houghton, Mifflin, 1962).
 80. President's Science Advisory Council, *Use of Pesticides*, (Washington, 1963).
- Chapter 12: Start of the Air Service
1. J. C. DILLON, *Early Days, A Record of the Early Days of the Provincial Air Service of Ontario*, (Toronto: DLF, 1961. Reprinted 1964), p. 2.
 2. T. E. MACKEY, *One Hundred Years of History — The Air Service*, (Toronto: DLF, mss, 1965), p. 2.
 3. R. N. JOHNSTON interviewed by P. PROSS, L. WAISBERG and K. EVANS, July 13, 1964, (DLF, mss.), pp. 1, 2, 4, 5, 8. According to Johnston (p. 8) oblique photography for aerial surveying was developed by the Surveyor-General of Canada, De Ville, who "conceived the idea that you could plot obliques by a system of perspective grids which would enable the plotter to correct the data for perspective distortion . . . What De-Ville proposed to do was to impose a transparent grid of proper perspective on each oblique aerial survey photo, and from the perspective square on the photo plot on to true squares in the final map." Oblique photography was before long superseded by vertical photography, with its possibilities of stereoscopic interpretation and use of short focal-length lens camera with wider coverages, etc.
 4. DILLON, *op.cit.*, p. 2. See also E. J. ZAVITZ, *Recollections*, (Toronto: DLF, 1965) p. 14.
 5. MACKEY, *op.cit.*, p. 4.
 6. DILLON, *op.cit.*, p. 4. See also R. N. JOHNSTON, "A Statement with respect to W. R. Maxwell." (mss, Oct. 4, 1965) p. 1.
 7. DILLON, *op.cit.*, p. 3.
 8. *Ibid.*, p. 3.
 9. MACKEY, *op.cit.*, p. 6.
 10. *Ibid.*, p. 7-8.
 11. R. N. JOHNSTON, "W. R. Maxwell", (mss, Oct. 4, 1965) p. 2.
 12. *Ibid.*, p. 4.
 13. *Ibid.*
 14. JOHNSTON, "W. R. Maxwell" (mss, Sept. 27, 1965) p. 2.
 15. JOHNSTON, *Interview*, pp. 21-23.
 16. MACKAY, *op.cit.*, p. 9.
 17. JOHNSTON, *Interview*, p. 16.
 18. DILLON, *op.cit.*, p. 7.
 19. JOHNSTON, "W. R. Maxwell" (Sept. 27, 1965) p. 2.
 20. MACKEY, *op.cit.*, p. 9.
 21. DILLON, *op.cit.*, p. 14.
 22. "Communications", (Toronto: DLF, mss, n.d.) p. 4.

23. See Commission of Inquiry into the Ontario Provincial Air Service, *Proceedings*, (Toronto: mss, 1934).
24. MACKEY, *op.cit.*, pp. 17-18.
25. DILLON, *op.cit.*, p. 27.
26. AR, 1965, p. 127.
27. *Toronto Daily Star*, July 12, 1929.
28. AR, 1946, p. 108; 1951, p. 14; 1959, p. FP-6; 1964, p. 118.

Chapter 13: Pulp and Paper Industry

1. *Woods and Forests, Report Book II, 1877-1901*, pp. 196-197, Oct. 3, 1892, and *Woods and Forests, Orders-in-Council, 1868-1901*, p. 153, Oct. 28, 1892. On the development of the industry in general see J. A. GUTHRIE, *The Newsprint Paper Industry* (Harvard, 1941) and N. REICH, *The Pulp and Paper Industry*, (Montreal: McGill, 1926).
2. *Woods and Forests, Report Book II, 1877-1901*, pp. 224-228, "Draft Agreement between the Province, E. V. Douglas & F. H. Clergue". Rates were 20¢ per cord on spruce and hardwood; 10¢ per cord on all other wood.
3. *Ibid.* The Nipigon Agreement was signed with James Whalen of Port Arthur representing a group of American financiers, Wolseley Associates, April 24, 1895, p. 235. A. J. Mohr, a Buffalo promoter, admitted his proposed mill at Renfrew was completely speculative, but pleaded that he could not hope to interest capital unless he were able to show where he expected to obtain a supply. See *ibid.*, "Petawawa Lumber, Pulp and Paper Agreement, 1898", p. 298-303. Spanish River Pulp and Paper Company, Sept. 12, 1899, p. 341-343; Sturgeon Falls Pulp and Paper Company, 1898, p. 305; Mattawa Pulp and Paper Company, Sept. 8, 1899, p. 343-345.
4. AR, 1900, p. vi.
5. *Ibid.*, 1901, pp. xii-xiii.
6. *Woods and Forests, Report Book III*, pp. 59-61, 120, 126, 191-193.
7. AR, 1905, p. 7.
8. *Woods and Forests, Report Book II, 1877, 1901*, pp. 407-408, "Memorandum re-benefits of Sawing Logs in the Province": 1901; AR, 1900, p. v.
9. President's Address, Lumbermen's Association of Ontario. Jan. 29, 1901, *Minute Book*, pp. 181 and 196. Cf JOHN CHARLTON, *Diary*, vol. 11, "Summary of events . . . 1899".
10. See Ch. 3 for a description of Ottawa operations. The following description is derived from: TOM THORPE, *A Review of the Logging and Pulp Operations in the Sudbury District during the years 1901-1950* (Typescript); TOM THORPE, "Boom Days", *Sylva*, Vol. III (1947), No. 2, pp. 27-33; W. R. WILLIAMS, "Big Tugs and Big Rafts", *Inland Seas*, Vol. III (1947), pp. 11-16.
11. See Chart: "All Log Timber Cut: 1899-1954—Ont." DLF, Timber Branch, Timber Vault.
12. *Woods and Forests, Report Book III*, "Memorandum re: Timber Sale of 1903", pp. 41-50. The Lumbermen objected to the ten year deadline and eventually compromised with the Commissioner, E. J. Davis, on a fifteen year limit. (See: Lumbermen's Association of Ontario, *Minute Book*, pp. 213-214.)
13. See *Woods and Forests, Report Book II, 1877-1901*, pp. 317-321 Memorandum on Forest Reserves, March 21, 1899; "Forest Reserves Act", 61 Vict. c.10 (1898); *Report Book II*, pp. 441-450, Forest Reserve at Lake Temagami, Jan. 7, 1901, and "Forest Reserves Amendment Act", 63 Vict., c.12 (1900).
14. *Woods and Forests Report Book II, 1877-1901* SOUTHWORTH's memorandum on Regeneration, June 1, 1897, pp. 498-502; Memorandum of March 21, 1899, pp. 317-321; and Memorandum of Jan. 7, 1901, pp. 441-450.
15. See *ibid.*, and "Regulations Respecting Forest Reserves, 1902", *Woods and Forests Report Book III*, pp. 22-24. The first reserve had been established in 1899, when a large cut-over area in the Frontenac and Addington counties was set aside in the hope

- of protecting it from fire and encouraging a second growth of white pine (*Report Book II*, p. 317, and *Order in Council Book II*, p. 241). A year later the recently burnt over Thunder Cape in the Thunder Bay region was brought under similar supervision (Order in Council, Feb. 16, 1900 and AR, 1900, p. vii). The Temagami area was set aside in 1901 (see above); the Mississauga Reserve in 1904 (*Report Book III*, p. 85 and *Order in Council Book III*, Order-in-Council of Feb. 24, 1904, p. 51; the Nipigon Reserve in 1905 (*Order in Council Book III*, Order in Council of Jan. 7, 1905, p. 78); and in 1909 the Quetico Reserve was set aside as a park site and pine preserve (*Report Book III*, pp. 418-422, *Order in Council Book III*, Order of April 1, 1909, pp. 185-186).
- A less important conflict of policy arose as a growing number of city dwellers built summer cottages in forest areas. Previously, when settlers' land had been involved, the Government had held that as long as settlement land was unpatented operators could cut on it, though by 1900 their cutting was confined to pine. The settlers always objected to this policy but for obvious reasons were unable to change it. However, towards the end of the nineteenth century the Department began selling lakeside lots and islands to tourists who erected summer cottages and made various improvements. They soon objected to lumbermen marring the beauty of their lots by stripping them of trees and leaving quantities of slash on the ground to act as a fire hazard. After lengthy negotiations, the Department finally allowed the cottagers to buy the small quantities of pine standing on their lots "so that they might own and protect it". The lumber companies were compensated with lands elsewhere. (*Report Book II*, "Memorandum on Settlers and Timber", 1901, pp. 453-455.)
16. "Memorandum on Timber Revenue", 1903, *Hon. G. W. Ross Papers*.
 17. See *Greater Ontario: Results of the Practical Administration of the Crown Lands, Forests and Mines by the Whitney Government* (Toronto, 1908); A. SHORTT and A. DOUGHTY, *Canada and Its Provinces* (Toronto, 1914) vol. xvii (Prov. of Ontario), pp. 181-185 and SIR G. W. ROSS, *Getting into Parliament and After* (Toronto, 1913), Ch. XVI. A short summary of political changes is found in *Directory and Guide to the Services of the Ontario Government* (Toronto: Dept. of Tourism and Information, 1964) pp. 259-284.
 18. See ch. 16, footnote 1, for details of the Department's various changes in name.
 19. See ALICE MARWICK, *The Honourable Frank Cochrane* (Cochrane, 1950), pp. 5-10.
 20. Declared defaulted were the Nipigon, Montreal River, Dryden, and Rainy Lake Concessions (*Report Book III*, Report of Jan. 18, 1906, pp. 186-191) and the Keewatin concession (*ibid.*, pp. 191-193). The new sale was proposed in a memorandum of Feb. 7, 1906 (*ibid.*, pp. 194-196). J. F. CLARK's "Memorandum on Methods of Selling Pulpwood Stumpage" (Feb. 3, 1906) is in the *Whitney Papers*.
 21. Dues, however, had been raised to 40¢ for spruce cordwood and 10¢ on other woods. (*Report Book III* "Conditions of selling forfeited Pulp Limits", Feb. 19, 1906, pp. 197-213).
 22. J. R. Booth received the Montreal River Limit for a bonus of \$300,000 (*Report Book III*, June 11, 1906, pp. 230-231) and Robert McLaughlin, the Dryden and Wabigoon Lake Limit for \$6,000 bonus (*ibid.*, July 10, 1906, pp. 233-235). The Nipigon and Rainy Lake limits were offered in 1907. (*Ibid.*, Oct. 11, 1907, pp. 328-331).
 23. *Report Book III*, Timber Sale of 1907, pp. 302-304, and *ibid. IV*, Amendment of Crown Timber Regulations, pp. 58-63. For many years the Department had relied on the cullers at Quebec to provide a check on the lumbermen's sworn statements of cut.

- See J. E. HODGETTS, *Pioneer Public Service*, (Toronto: University of Toronto Press, 1956), pp. 45-46 and SOUTHWORTH and WHITE, *op.cit.*, passim). However, as the trade across the Lakes came to dominate the industry, the importance of the Quebec office diminished and in 1890 Ontario provided for the examination and licensing of cullers to work within the province ("The Ontario Cullers' Act", 53 Vict., c.7). These men were able to provide the field check on operator's cut which led White to place greater responsibility on them and eventually to close down the Quebec office. (See *Report Book III*, Timber Agency at the Port of Quebec, October 1, 1907, pp. 318-323).
24. *Greater Ontario: The Results of the Practical Administration of Crown Lands, Forests and Mines by the Whitney Government* (Toronto, 1908).
 25. AR, 1910, p. viii and *Report Book III*, Timber Sale, 1909, p. 216.
 26. *Northern Ontario: Its Progress and Development Under the Whitney Government* (Toronto, 1913).
 27. J. P. BERTRAND, *Timber Wolves* (mss., c.1961), p. 48, and *Timber Commission Hearings* (typescript), pp. 1500 ff.
 28. *Ibid.*, pp. 1778, 7850.
 29. BERTRAND, *op.cit.*, p. 51.
 30. *Ibid.*, pp. 75-76.
 31. *Timber Commission Hearings*, p. 3558.
 32. See BERTRAND, *op.cit.*, pp. 50, 93, 66-115 and *Timber Commission Interim Report on the Operations of Walter H. Russell*, July 28, 1920, p. 3.
 33. *Hearings*, pp. 1798, 1818.
 34. *Ibid.*, pp. 1504-1508.
 35. Timber Commission, *Report*, June 26, 1922, pp. 18-19.
 36. *Ibid.*, p. 36.
 37. *Interview with the Hon. E. C. Drury*. (C.B.C. typescript).
 38. *Mail and Empire*, March 3, 1921.
 39. *Ibid.*, March 14, 1921.
 40. *Hearings*, pp. 6395-6444, especially pp. 6433, 6439.
 41. *Mail and Empire*, Jan. 22, 1921.
 42. *Hearings*, p. 6438.
 43. Timber Commission, *Interim Report*, Oct. 30, 1920, p. 6-7.
 44. For Mead see BERTRAND, *op.cit.*, pp. 95-97; for the Dryden mill see *ibid.*, p. 98. For Backus see: *The Mandonian* (Minnesota and Ontario Paper Co.), 1954, pp. 3-10 and *Who Was Who in America*, 1897-1942, Vol. 1, (Chicago, 1945) p. 41. For Abitibi see: *Report Book IV*, Abitibi Agreement, Aug. 20, 1912, pp. 238-254, and BERTRAND, *op.cit.*, p. 99.
 45. See CARL WIEGMAN, *Trees to News* (Toronto: McClelland & Stewart, 1953) p. 13.
 46. BERTRAND, *op.cit.*, pp. 65 ff.
 47. See *History of the Woodlands* (Kapusksing: Spruce Falls Pulp and Paper Co., 1965) p. 3.
 48. See F. J. Sensenbrenner to E. C. Drury, June 16, 1921 in Department of Lands and Forests, Spruce Falls Pulp and Paper Co., General Correspondence File #13555 (Hereafter cited as File #13555); same to same, June 1, 1920, in *The Hon. E. C. Drury Papers* (O.A.); and again, Aug. 15, 1922, File #13555.
 49. BERTRAND, *op.cit.*, p. 104.
 50. H. E. WILMOT, *The Backus Deal* (Toronto, 1923); Draft copy of Mr. Raney's Speech at Uxbridge on "The Backus Deal" in *The Hon. E. C. Drury Papers; Mail and Empire*, Oct. 12, 1921 (James McCreary Scandal).
 51. The U.F.O.'s policies produced a curious reaction in the Canadian Forestry Association. Robson Black, Secretary of the Association, forwarded congratulations to the Premier on his ideas of forestry reform and added to these a three-point program of elimination of patronage, the establishment of a Forestry Advisory Board, and the transfer of responsibility for the forests of the province into the hands of competent technically trained personnel (Black to Drury, Dec. 15, 1919, *Hon. E. C. Drury*

- Papers*). When word of this memorandum got back to the Association there was a great deal of dissatisfaction with Black's letter, which was written on his own initiative but under the Association letterhead. C. J. Booth, writing for the "Ontario licence holders on the Ottawa" quickly made it clear to Drury that Black's "memorandum has never been submitted or approved by the members or directors of the Canadian Forestry Association." (Booth to Drury, Jan. 9, 1920, *ibid.*)
52. AR, 1923, p. 11.
 53. Timber Commission, *Report*, p. 33.
 54. AR, 1923, p. 11.
 55. 14 Geo. V, c.17.
 56. AR, 1924, p. 10.
 57. Benaiah Bowman to F. J. Sensenbrenner, June 8, 1925, File #13555.
 58. F. J. Sensenbrenner to J. Lyons, Dec. 18, 1924, *ibid.*
 59. *History of the Woodlands*, p. 4.
 60. Strachan Johnston to Howard Ferguson, April 17, 1926, and Ferguson to Johnston, April 21, 1926, *The Hon. Howard Ferguson Papers*.
 61. BERTRAND, *op.cit.*, p. 108. See pp. 100 ff. for details of Lakehead expansion.
 62. *Production Chart: All Pulpwood*, DLF, Timber Branch, Timber Vault.
 63. *The Mandonian*, p. 16-17.
- Chapter 14: Algonquin and Rondeau Parks
1. 56 Vict., c.8, (1893).
 2. Royal Commission on Forest Reservation and National Park, *Report*, 1893 (Toronto, 1893, reprinted Toronto: DLF, 1956) pp. 27-28.
 3. W. GIBSON, "The Algonquin National Park of Ontario", Clerk of Forestry, *Report*, 1896, p. 122.
 4. JAMES DICKSON, *Camping in the Muskoka Region*, (Toronto, 1886, reprinted Toronto: DLF, 1960).
 5. JOSEPH ADAMS, *Ten Thousand Miles Through Canada*, (London, 1912), pp. 50-74.
 6. OLA, Sessional Papers, No. 21, (not printed OA).
 7. C. R. TILT, *Provincial Parks in Ontario in 1959*, (Toronto: DLF, 1959), p. 12.
 8. *Petition of the Town Council of Chatham, Praying that Pointe Aux Pins may be set aside as a public park*, petition 23, 1894 (OA).
 9. 57 Vict. c.15, (1894).
 10. 58 Vict. c.56, (1895) s.8.
 11. 7 Edward VII, c.22, (1907).
 12. 11 Geo. V, c.35 (1921); 12-13 Geo. V, c.39, (1922).
 13. Resolutions of the Township of Bosanquet, Oct. 3, 1932 and Mar. 5, 1934; Petition re Lot. 8/A., Stoney Point Indian Reserve, sent in by M. D. McVicar, May 3, 1935, Records, file 104942, Vol. 1; AR, 1938, pp. 12-13.
 14. "An International Forest Reserve—Canadian-U.S. Proposal". By a New York correspondent in the *Manchester Guardian Weekly*, Vol. 26, No. 8, February 19, 1932.
 15. FRED BODSWORTH "The Fight to keep the Wilderness Wild", *MacLean's Magazine*, May 15, 1951, p. 13.
 16. JULIUS F. WOLFF, JR., "The Quetico-Superior Country—An Arena of Conflict", *Quetico Superior Institute*, May 22, 1946.
 17. ERNEST C. OBERHOLTZER "A University of the Wilderness", reprinted for the Quetico-Superior Council from *American Forests and Wild Life*, (November, 1929), Records, Fort Frances.
 18. Memo, Aubrey White to Frank Cochrane, March 29, 1909. Records, file 90131.
 19. *Annual Report*, 1913, p. xiii.
 20. Chamber of Commerce, Port Arthur to Heenan, May 27, 1936. Records, file 110765, Vol. 1; Chamber of Commerce, Fort William to Heenan, Jan. 13, 1938. In 1938 Records, file 110765, Vol. 1.
 21. Ponsford to Heenan, August 27, 1938, Records, file 110765, Vol. 1.
 22. Hipel to various members of Cabinet, Jan. 4, 1943; Hipel to John McLeod, Acting

- Secretary, Board of Trade, Sault Ste. Marie, April 7, 1943, Records, file 125864, Vol. 1.
23. AR, 1899, p. xv.
 24. AR, 1920, p. 13.
 25. AUDREY SAUNDERS, *Algonquin Story*, (Toronto: DLF, 1963) p. 114.
 26. 3-4 Geo. V, c.16, (1913).
 27. *Ibid.*, c.15.
 28. 14 Geo. VI, c.59 (1950).
 29. AR, 1894, App. 39, p. 61.
 30. MacDonald to Gibson, May 25, 1914, Fort Frances, file 1913-15.
 31. *Regulations Quetico Provincial Park*, Order in Council, June 11, 1914. *Regulations Algonquin Provincial Park*, Order in Council, Nov. 24, 1905 to Jan. 20, 1920.
 32. 17 Geo. V, c.25, s.15 (c).
 33. SIG OLSON, "Quetico-Superior Wilderness International and Unique", *The Living Wilderness* (Dec., 1942) p. 31.
 34. AR, 1894, App. 40, pp. 64-65.
 35. E. J. ZAVITZ, *Recollections, 1875-1964*, (Toronto: DLF, 1964) p. 8.
 36. Memo, Crosbie to MacDougall, April 21, 1942. Records, file 123615, Vol. 1.
 37. Order in Council, December 17, 1959. Parks file 1-1-2-4, Vol. 2.
 38. Statement by the Hon. John P. Robarts, Prime Minister of Ontario, regarding Prospecting in Provincial Parks made in the Legislature, April 4, 1962. Parks file.
 39. SAUNDERS, *op.cit.*, pp. 79-80.
 40. Royal Commission, 1893, pp. 24-26.
 41. SAUNDERS, *op.cit.*, pp. 111-112.
 42. *Ibid.*, pp. 157-158.
 43. C. H. ZAVITZ, *History of the Lake Erie Forest District* (Toronto: DLF, 1963), p. 14.
 44. AR, 1908, App. 44, pp. 116, 117. AR, 1919, App. 37, pp. 99-100.
 45. *Report of the Committee On Research* (May 1960) (DLF, mimeo), p. 44. *Annual Report Lake Simcoe District*, 1958-59.
 46. AR, 1937, p. 12.
 47. AR, 1900, App. 30, p. 57.
 48. AR, 1906, App. 144. C. H. Zavitz, *op.cit.*, p. 52.
 49. *Annual Report of Algonquin Provincial Park*, 1941, p. 28.
 50. AR, 1914, App. 36, p. 87. First record noted of planting of fingerlings (bass) in Algonquin.
 51. AR, 1915, App. 24, pp. 63-64.
 52. AR, 1939, p. 16.
 53. AR, 1920, App. 49, p. 237.
 54. AR, 1915, App. 24, pp. 65-66.
 55. *Annual Report of Algonquin Provincial Park*, 1932, p. 28.
 56. *Ibid.*, 1937, p. 13.
 57. AR, 1921, App. 41, pp. 122-123.
 58. AR, 1929, p. 14.
 59. Order in Council, March 3, 1955, Parks file 1-1-2-6. AR, 1956, s.8, p. 2.
 60. SAUNDERS, *op.cit.*, p. 125.
 61. SAUNDERS, *op.cit.*, Chapter 14, "The Story of Tom Thomson", pp. 163-175.
 62. SAUNDERS, *op.cit.*, pp. 115-117.
 63. SAUNDERS, *op.cit.*, pp. 124-125.
 64. AR, 1919, App. 37, p. 99.
 65. AR, 1900, App. 30, p. 57.
 66. AR, 1906, App. 59, pp. 143-144.
 67. AR, 1922, App. 45, p. 134. AR, 1940, p. 15.
 68. AR, 1904, App. 66, p. 123, AR, 1922, App. 45, p. 134.
 69. *Annual Report of Algonquin Provincial Park*, 1932, p. 14, 1937, p. 13.
 70. "Land Occupation in Quetico Provincial Park", Records, file 129916.
 71. Cram to Boulton, Dec. 13, 1951, Records, file 110765, Vol. 2.
 72. AR, 1955, s.8, p. 2. AR, 1956, s.8., p. 2.
 73. *Royal Commission*, 1893, p. 27.
 74. AR, 1894, App. 39, pp. 60-61; AR, 1895, App. 32, pp. 64-65; *Report of the Committee on Research* (May 20, 1960), p. 20; interview with Don Burton, Research, Maple.
 75. *Report of Algonquin Provincial Park*, 1936, p. 21; 1937, p. 18. *Algonquin Park Newsletter*, July 15, 1935. SAUNDERS, *op.cit.*, pp. 186-187.
 76. SAUNDERS, *op.cit.*, p. 190. *Report on the Committee on Research*, May, 1960, p. 26.
 77. Harkness to Johnston, Feb. 15, 1946.

- Records, file 123615, Vol. 1; *Algonquin Park Newsletter*, June 19, 1939.
 78. Harkness to MacDougall, Feb. 16, 1944. Records, file 125864, Vol. 1.
 79. SAUNDERS, *op.cit.*, p. 191. Dymond to Crosbie, Nov. 2, 1945. Records, file 123615, Vol. 1.
 80. AR, 1945, p. 58.
 81. Report of the Algonquin Provincial Park Nature Programme, 1954. Parks file, 6-34.
 82. *Report, Park Naturalist Programme*, Rondeau, 1952. Parks file 6-34.
 83. *Report, Park Naturalist Programme*, Rondeau, 1954, Parks file 6-34.
- Chapter 15: Settling New Ontario
1. AR, 1899, p. viii.
 2. *Ibid.*, p. ix.
 3. "New Ontario", according to the survey parties, was considered to be north of the Canadian Pacific Railway line running west across the province. See *Report of the Survey and Exploration of Northern Ontario, 1900* (Toronto, 1901), p. v.
 4. 1 Edw. VII, c.6 (1901).
 5. *Report Book*, "Memorandum by Assistant Commissioner for the Premier of Ontario, re Veterans' Land Co.", October 28, 1904.
 6. E. J. ASHTON, "Ontarios' Own Northland", *United Empire*, July, 1929, p. 374.
 7. Examples of this are *New Ontario* and *Northern Ontario, Canada*, each of which was issued several times with additional material.
 8. W. KIRKCONNELL, *Kapuskasing—A Historical Sketch*, Bulletin of the Departments of History and Political and Economic Science, Queen's University, Kingston, Ontario, No. 38 (January, 1921), p. 8.
 9. Commission of Inquiry-Kapuskasing Colony, *Report* (Toronto, 1920), p. 7.
 10. However, in a letter to the Board of Adjustment, the Premier stressed that the "treatment of all settlers (should) err on the side of generosity rather than to strive to drive a hard bargain with them."
 11. *First Report of the Relief Land Settlement Committee of Ontario for the years 1932 and 1933* (Toronto, 1934), p. 12.
 12. *Toronto Globe*, April 18, 1935.
 13. AR, 1937, p. 11.
 14. See G. L. MCDERMOTT, "Frontiers of Settlement in the Great Clay Belt, Ontario and Quebec", *American Association of Geographers, Annals*, Vol. 51 (Sept., 1951), p. 269.
 15. *Greater Ontario: Results of the Practical Administration of Crown Lands, Forests and Mines by the Whitney Government* (c.1908), p. 3.
 16. 2 Geo. V, c.2.
 17. AR, 1915-1916, pp. viii-ix, 93.
 18. Order in Council, March 13, 1908 and Order in Council, November 26, 1912.
 19. July 14, 1913.
 20. See *Business Methods in Public Administration: The Splendid Record of the Ferguson Government* (Toronto, 1926), p. 68.
 21. See JON KENT, *Agriculture in the Cochrane Clay Belt*, (unpublished M.A. thesis, University of Toronto, Department of Geography, 1964), ch. VII and VIII.
 22. 9-10 Eliz. II, c.81 (1960-61).
- Chapter 16: Changes in the Department
1. This name was short-lived, being used in the Minister's *Report* dated Dec. 31, 1905, but changed to Lands, Forests and Mines by the time the 1906 *Report* was issued. The latter name remained until June, 1920, when "The Department of Mines Act" (10 Geo. V, c.12) established a separate Department of Mines and the parent Department assumed its present title.
 2. AR, 1905, App. Nos. 1, 2, 6.
 3. "An Act for raising Money on the Credit of the Consolidated Revenue Fund of Ontario", 2 Geo. V, c.2 (1912).
 4. The first "Report of the Forestry Branch" appeared as an appendix to the 1912-1913 AR and continued to appear in this way until after the 1941 reorganization. The following is drawn from the Branch's early reports; E. J. ZAVITZ interviewed by K.

- EVANS and P. PROSS, Aug. 10, 1964, and by R. S. LAMBERT, R. N. JOHNSTON, and C. R. MILLS, Oct. 4, 1965; E. J. ZAVITZ, *Recollections* (Toronto: DLF, 1965); A. H. RICHARDSON, *Forestry in Ontario* (Toronto: Department of Forestry, 1928) and E. J. ZAVITZ, *Fifty Years of Reforestation in Ontario* (Toronto: DLF, 1958).
5. AR, 1908, App. No. 46 "The Forest Resources of Ontario", by Aubrey White, p. 132.
6. See ARs for the period.
7. AR, 1916, App. No. 1.
8. AR, 1921, p. 15.
9. AR, 1915-16, App. No. 36, p. 109.
10. AR, 1919, p. 163; 1920, p. 13.
11. *Ibid.*, p. 117.
12. University of Toronto, Faculty of Forestry, *Calendar*, 1922-23, p. 29.
13. E. C. DRURY interviewed by J. JAMES and F. SCHINDLER, March 19, 1965.
14. Timber Commission, *Interim Report*, Oct. 30, 1920 (Toronto: King's Printer, 1921) p. 7. See also Chapter 13 and H. V. NELLES, *Timber Regulation: 1900-1960* (Toronto: DLF, mss. 1965).
15. Robson Black to E. C. Drury, Dec. 15, 1919, *Drury Papers*.
16. AR, 1922, App. No. 52, pp. 274-282.
17. *Ibid.*, p. 275.
18. *Ibid.*
19. *Ibid.*, p. 274.
20. *Ibid.*, p. 275.
21. "Lumbermen Protest Judson Clark Report", *Illustrated Canadian Forestry Magazine*, Vol. XX (Jan., 1923) No. 1, pp. 27, 54-55, 57 at p. 54.
22. AR, 1922, p. 5.
23. AR, 1923, App. No. 1, pp. 18-20.
24. AR, 1925, p. 10.
25. AR, 1923, p. 11.
26. AR, 1921, App. No. 2, p. 22.
27. AR, 1924, p. 7.
28. AR, 1920, App. No. 1, p. 18 and *ibid.*, 1923, App. No. 1, p. 18.
29. AR, 1926, p. 7.
30. A. R. M. LOWER and H. A. INNIS, *Settlement and the Forest and Mining Frontier in Eastern Canada* (Toronto: Macmillan, 1936) p. 95. See Chapter VIII for a general discussion of the Department.
31. AR, 1928, p. 10.
32. AR, 1929, p. 7. The menu card of the banquet is reproduced here at p. 19.
33. AR, 1930, p. 17.
34. AR, 1931, p. 18.
35. Woods and Forests, *Report Book 4*, Dec. 9, 1931, p. 622.
36. AR, 1932, p. 13-14.
37. AR, 1930-33, App. No. 4.
38. AR, 1930, p. 17.
39. AR, 1933, p. 16.
40. *Ibid.*
41. Memo F. Noad to P. Heenan, Aug. 29, 1934, *Hepburn Papers*.
42. AR, 1932-1933, App. 7.
43. See *To the Electors—A Statement by Mitchell F. Hepburn*. Other 1934 election material includes *The Increased Debt and Extravagant Expenditure of the Henry Government, This Way We Follow: A Review of the Liberal-Conservative Program as voiced by Mitchell F. Hepburn and Harry Nixon*, revealing how shallow and destructive it is fundamentally, *The Speaker's Handbook of the Liberal-Conservative Party*, CHARLES VINING, "This Man Hepburn" *Toronto Saturday Night*, April 28, 1934 and NEIL MCKENTY, "Mitchell Hepburn and the Ontario Election of 1934" *Canadian Historical Review*, Vol. XLV (1964), p. 293 ff.
44. See Heenan to Hepburn, May 27, 1941, *Hepburn Papers* for Heenan's accounts of his career. Other details from members of the Department and L. WAISBERG, *Biographical Sketch of Peter Heenan* (Toronto: DLF, mss, 1965).
45. See F. Noad to Hepburn, Jan. 13, 1933, *Hepburn Papers*, F. A. MACDOUGALL interviewed August 25, 1965 by V. NELLES and L. WAISBERG.
46. AR, 1934, p. 74; 1935, App. 2, pp. 21-23.

47. Material on Noad based on recollections of J. A. Brodie, T. Mackey, F. A. MacDougall, A. Fenwick and others.
 48. Inquiry into the Ontario Provincial Air Service, 1934, "Proceedings".
 49. AR, 1935, App. 1, p. 19.
 50. AR, 1936, p. 7.
 51. AR, 1933-1935/6, App. 4; 1936/7-1937/8, App. 3.
 52. AR, 1934, App. 7, p. 39.
 53. AR, 1938, App. 7, p. 42. (Note: fire and forest ranging are consolidated; forest research is omitted.)
 54. AR, 1937, App. 20, p. 80.
 55. AR, 1937, p. 7.
 56. AR, 1938, p. 7.
- Chapter 17: Politics and Timber
1. *To the Electors—A Statement by Mitchell F. Hepburn* (1934), p. 5.
 2. AR, 1934, p. 16.
 3. See memorandum from Frederick Noad to Peter Heenan, August 29, 1934, *Hepburn Papers*, and Order in Council, September 11, 1934, in *Woods and Forests Order in Council Book IV*, p. 144.
 4. AR, 1933, p. 16. The dues were reduced 60% for the 1931-32 season; 80%, when bonus was paid, and 50% when no bonus paid, for the 1933 season.
 5. AR, 1934, p. 16; Memorandum from Frederick Noad to Peter Heenan, August 29, 1934, *Hepburn Papers* and *Woods and Forests Order in Council Book IV*, Order in Council of September 11, 1934, p. 144.
 6. AR, 1934, p. 22.
 7. E. S. Noble to Hon. W. A. Gordon, July 6, 1934, Department, File No. 13555.
 8. AR, 1934, p. 22.
 9. *Woods and Forests, Order in Council Book IV*, Order in Council, September 11, 1934.
 10. 24 Geo. V, c.66. See AR, 1934, p. 21.
 11. The men appointed inspectors were Thorstein Ehn and Walter Woodward.
 12. AR, 1934, p. 21.
 13. See 1 Geo. VI, c.70; AR, 1937, p. 8; AR, 1938, p. 20; *ibid.*, 1939, p. 22.
 14. *Order in Council Book IV*, May 13, 1933, p. 656; Order in Council, Mar. 23, 1935 in AR, 1935-1936, p. 16; and Order in Council, July 24, 1935, *ibid.*, p. 17. The dues were reduced from \$1.40 to \$1.00.
 15. AR, 1935, p. 10.
 16. 1 Edward VIII, c.22 (1936). See AR, 1936-37, p. 14 and "Memorandum for the Prime Minister regarding the activities of the Department of Lands and Forests", Feb. 15, 1937, *Hepburn Papers*.
 17. C. H. Carlisle to M. F. Hepburn, May 18, 1937, *ibid.* The company had held the Black Sturgeon, Long Lac, Little Pic, and Naga-gami limits, and gave up all but the Black Sturgeon concession.
 18. For the full agreements see AR, 1937-1938, p. 69-184. In the debate on the Throne Speech, 1937, Macauley lashed out at Liberal pulp policy. He accused the Liberals of giving the North away under the guise of making work. He was particularly critical of the agreement with the Pulpwood Supply Co., *Globe and Mail*, Feb. 25, 1937.
 19. AR, 1936-1937, p. 15.
 20. Speech Material for 1937 Election, *Hepburn Papers*.
 21. See Select Committee of the Legislature Appointed to Inquire into the Administration of the Department of Lands and Forests, Majority Report (published separately, King's Printer: Toronto, 1941 and as App. 1 to *JLAO*, pp. 7-31) p. 21; CHARLES VINING, *Some Conclusions Regarding Newsprint*, for the Newsprint Export Manufacturers Association of Canada, pp. 13-14; Memorandum regarding *Canadian Newsprint Situation*, Feb. 4, 1935, by National Trust Company, *Hepburn Papers* and CHARLES VINING, *Newsprint Prorating, An Account of Governmental Policy in Quebec and Ontario* (Montreal, Canadian Pulp and Paper Association, 1940).
 22. See VINING, *op.cit.*, pp. 25-30. When J. L.

- Ralston, W. H. Howard and Charles Vining representing the Newsprint Exporters' Association of Canada interviewed Duplessis early in 1937, Vining reported to Hepburn that "Duplessis expressed himself as being ready to make an agreement with you that the two Provincial Governments would approve no construction of new newsprint machines or mills without consulting each other. Mr. Duplessis said, in fact, that he felt this was already an informal understanding between you on the strength of your conference here a few months ago." (C. Vining to M. F. Hepburn, March 12, 1937, *Hepburn Papers*).
23. Memorandum, Heenan to Hepburn, March 24, 1939. *Ibid.*
 24. Heenan to Hepburn, May 13, 1939, *ibid.*, and VINING, *op.cit.*, pp. 47-52 and 84, 85 for Orders in Council imposing and revoking penalties.
 25. Biographical detail on Cox and Johnson from BERTRAND, *op.cit.*; HON. GEORGE WARDROPE and F. A. MACDOUGALL interviewed by H. V. NELLES and L. WAISBERG, Aug. 25, 1965. *Hepburn Papers* contain numerous letters and telegrams from both men; their associates and rivals. See especially: C. A. Wilson to M. F. Hepburn, Dec. 27, 1936; Heenan to Hepburn, Nov. 21, 1939; C. H. Carlisle to Hepburn, May 18, 1937; E. E. Johnson to Hepburn, April 24, 1936; A. J. McComber to Hepburn, Aug. 22, 1936; Al Johnson to Hepburn, Nov. 1, 1940 (telegram); Hepburn to Johnson, Nov. 2, 1940 (telegram); H. C. Draper to Hepburn, May 26, 1938.
 26. See Heenan to Hepburn, Feb. 26, 1938, *Hepburn Papers*; AR, 1937-38, p. 69, and R. O. Sweezy's testimony before the Committee of Enquiry, April 29, 1940, *JLAO*, 1939-40, App., pp. 335-371, esp. pp. 336-338, and *Financial Post* issues of summer, 1938.
 27. AR, 1942, pp. 118-128. The going rate for spruce was \$1.40 dues and bonus per cord; Brompton paid \$1.32½.
 28. An emergency conference of the North Western Ontario Associated Chambers of Commerce indicated the general concern for the state of the forest products industry. This conference passed a resolution requesting the government to appoint someone to make an inquiry to discover the cause of the stagnation in the industry and to recommend solutions to remedy the situation. (*Globe and Mail*, Jan. 24, 1939).
 29. See *Forestry Chronicle*, XIII (June, 1937) pp. 305-306, 350; XV (March, 1939), pp. 2-15 and A. H. Burk to F. D. Mulholland, Chairman, CSFE, Feb. 3, 1941, *Irwin File*.
 30. See Cain's condemnation of book-worms and theoreticians who do nothing but talk, in "Forest Management in Ontario", *Forestry Chronicle*, XV (March, 1939), pp. 16-28 at 27. Heenan attacked 'armchair critics' at a meeting of the CSFE and the Ontario Reforestation and Conservation Association, Fort William, *Daily Times Journal*, 24 Feb., 1939.
 31. *Toronto Star*, Dec. 22, 1936 and Fort William *Daily Times-Journal*, Jan. 14, 1937.
 32. C. A. Wilson to M. F. Hepburn, Dec. 27, 1936, *Hepburn Papers*.
 33. HON. G. WARDROPE and F. A. MACDOUGALL interviewed by H. V. NELLES and L. WAISBERG, Aug. 25, 1965. J. A. MCLEOD interviewed by H. V. NELLES, Aug. 1965.
 34. After Drew had become leader of the Conservative Party in December, 1938, a seat was opened up for him in January, 1939. The man who made way for him was William Finlayson, a former Minister of Lands and Forests. For a report of the speech see *Toronto Star*, Feb. 15, 1939 and *Globe and Mail*, Feb. 15, 1939.
 35. He endorsed the resolution on Feb. 16, 1939.
 36. *Toronto Telegram*, Mar. 8, 1939 and Wellington Jeffers, Financial Editor, *Globe and Mail*, Mar. 9, 1939.
 37. *Globe and Mail*, Mar. 11, 1939. The plan endorsed was one put forward by J. P. Ridley and J. H. Symington, who represented a majority of the bond holders. The

result of foreclosure would be that the bond holders would own everything and the common and preferred shareholders, the "junior security holders", would be entitled to nothing, unless a prior commitment had been made or unless there was a surplus, something very unlikely in this case.

38. *Globe and Mail*, Mar. 11, 1939; *Toronto Star*, Mar. 11, 1939; Wellington Jeffers, *Globe and Mail*, Mar. 13, 1939. Wellington Jeffers, Mar. 14, 1939, felt that Hepburn was right in trying to promote Abitibi reorganization but "the Government's haste in this matter is the main matter for criticism, that and the effect on the securities market."
39. *Globe and Mail*, Mar. 14 and 16, 1939 and *Toronto Star*, Mar. 14, 1939. Drew was supported by Macauley and Hepburn's former Attorney-General, A. G. Roebuck.
40. *Globe and Mail*, Mar. 14, 1939, and *JLAO*, 1939, p. 26, 15 March, 1939. Drew later saw this affair as being the primary reason for creating the Select Committee, *JLAO*, 1939-40, App., p. 7 and *JLAO*, 1941, App. p. 164-165.
41. *JLAO*, 1939, p. 107, 14 April, 1939; *JLAO*, 1941, App. 1, p. 7 and *Globe and Mail*, Apr. 13, 1939.
42. *Globe and Mail*, Apr. 15, 1939. Hepburn's agreement has been seen as mysterious. There have been suggestions that Hepburn, becoming increasingly dissatisfied with his Minister of Lands and Forests, wanted to move Heenan, but found he was too powerful politically. An investigation would provide sufficient cause for removal, so he encouraged Drew. However, a probe of this sort could damage Hepburn as much as Heenan, so that the instrument would appear to be too crude. A more likely explanation of Hepburn's acquiescence is that he genuinely believed the Government would come well out of the inquiry and wanted to clear the air of the unsettling gossip which was going on.
43. The Personnel: Hon. Paul Leduc, Minister

of Mines, M.P.P. Ottawa; Hon. Harry C. Nixon, Provincial Secretary, M.P.P., Brant; Hon. Colin Campbell, Minister of Public Works, M.P.P., Sault Ste. Marie; J. M. Cooper, Lib., Sudbury; A. L. Elliot, Lib., Peterborough; W. G. Nixon, Lib., Temiskaming; F. R. Oliver, U.F.O., South Grey; Drew, M.P.P., East Simcoe; Frank Spence, Cons., Fort William; and Dr. Harold Welsh, Cons., Hastings East. Cooper and Nixon had had considerable contact with the timber industry and Spence was in the timber business and had been Lands and Forests critic in the Conservative "shadow cabinet" that had been formed after Drew's election in 1939.

At the first meeting of the Committee after Heenan was appointed, Drew strenuously objected to Heenan's presence as a Committee member, pointing out that Heenan as Minister would be giving much of the evidence he would be expected to assess later as a Committee member. Not only was the idea of his passing judgment on his own evidence ludicrous, but his presence might embarrass himself or other Committee members when his role was being discussed. Leduc and Nixon took the position that if Drew objected he should have said so in the Legislature when the appointment was first announced. Having said nothing then, he must accept the Government's decision. (*JLAO*, 1939-1940, App., p. 11-12).

To prepare documents and conduct research for the Department's presentations to the Committee, H. C. Draper was retained. He had resigned as Solicitor and Assistant Deputy Minister of Forestry to go into private practice, Feb. 15th, 1938, having been with the Department since Oct. 1st, 1931.

44. *JLAO*, 1939-1940, App., pp. 7-9.
45. *Ibid.*, 9-10. Most of the 700,000 words of testimony came from witnesses employed by the Department or prominent in the forest products industry: The Department supplied

a third of the witnesses and they gave most of the testimony; another third came from major pulp and paper companies in Ontario and Quebec and most of their evidence related to export and proration. The remaining witnesses were either small operators and jobbers or independent experts. Hearings were held from January 12th to February 24th and from April 22nd to May 7th, 1940. They were broken up to allow Drew an opportunity to campaign in the Federal general election of March 26th, 1940.

46. *JLAO*, 1941, App. 1, pp. 728-747.
47. J. C. W. IRWIN interviewed by R. S. LAMBERT and L. WAISBERG, July 13, 1965, p. 22.
48. *JLAO*, 1941, App. 1, p. 9.
49. *Ibid.*, p. 26.
50. *Ibid.*, pp. 27-28.
51. *Ibid.*, p. 59.
52. *Ibid.*, p. 36.
53. *Ibid.*, p. 39.
54. J. W. PICKERSGILL, *The Mackenzie King Record*, Vol. I (Toronto: University of Toronto Press, 1960) pp. 36-73, gives a picture of this wartime atmosphere in Ontario. The behaviour of Hepburn and Drew would seem to indicate how strongly they felt about unity and the war cause.
55. An editorial in the Fort William *Daily Times-Journal*, Feb. 9, 1940, complimented the Committee on its fine behaviour.
56. *Globe and Mail*, May 9, 1940. Heenan stated later that the enquiry had been "very helpful in bring(ing) out various points. It has not reflected on anybody or on the industry or on any branch of the industry . . . There has been no politics in this Committee." (Conference of all those Interested in the Forest Products Industry, May 12, 1940, *Proceedings*, p. 65.)

The extent of agreement among the Committee members startled reporters on at least one occasion, particularly when they objected to the fact that the newspapers

were doing their best to "make news". They demonstrated striking unity in disapproving of the kind of scandal-oriented publicity given C. W. Cox's testimony (Feb. 22, 1940, *JLAO*, 1939-1940, App., p. 459-493). Always controversial, Cox hinted at scandal without specifying, making vague charges of election contributions (*ibid.*, p. 489) and offered criticism that was either ill-founded or so general as to be virtually meaningless. He charged, for instance, that the Pigeon Timber Co., had received large favours from the Department in connection with salvage operations on the burnt-over Onion River Limits (*ibid.*, pp. 487-488). Department records revealed, however, that the Department had thoroughly investigated the matter as soon as Cox had complained in April, 1933. (Cox's letter: *ibid.*, pp. 508-509; background: *ibid.*, pp. 498-508.) The investigation revealed that everything was in order and Cox was so informed, Aug. 17, 1933 (*ibid.*, pp. 516-517). E. E. Johnson, President of the Pigeon Timber Co., and a competitor of Cox's, testified that the operation had actually lost money. (*Ibid.*, p. 562.) Nevertheless, Cox's testimony was 'news' and the papers jumped on it. Hon. Paul Leduc, Chairman of the Committee, was startled by the discrepancy between the reports and the evidence given and raised the matter before the Committee. (*Ibid.*, pp. 493-494.) Leduc wanted it clearly understood that he was protesting that the papers had "printed statements that were not made by the witness." (*Ibid.*, p. 495.) Leduc and Heenan criticized the *Toronto Star* and *Evening Telegram* (*ibid.*, pp. 494-495) while Drew went so far as to suggest that the Attorney General consider charging the *Toronto Star* with criminal libel. (*Ibid.*, pp. 520-522.) This reaction, coupled with a steady diet of non-controversial evidence must have finally convinced the papers that there was little 'news' to be found in the Committee proceedings. Yet, in seeking

- news, the papers missed much of the impact of the evidence.
57. See *Evening Telegram*, May 8, 1940, and *Globe and Mail*, May 9, 1940.
 58. *Canadian Lumberman*, May 1, 1941, p. 22.
 59. There was some editorial comment to the effect that Department business should be conducted in the open, (*Globe and Mail*, April 10, 1941) and that more people, including the elected representatives, should show more interest in forest resource administration. (*Ibid.*, April 11, 1941.) See also Fort William, *Daily Times-Journal*, April 14, 1941 and *Evening Telegram*, April 11, 1941.
 60. For Heenan's description of this process see *JLAO*, 1939-1940, App. pp. 136-138.
 61. Conference of all those interested in the Forest Products Industry, Mar. 12, 1940, *Proceedings*, p. 65, and *JLAO*, 1939-1940, App. pp. 406-410. The Committee presented an interim report to the Legislature to this effect, Feb. 20, 1940 (*JLAO*, 1939-1940, p. 81).
 62. See *Globe and Mail*, Apr. 10, 1941; Apr. 11, 1941, and Apr. 19, 1941; Fort William *Daily Times-Journal*, Apr. 19, 1941; *Evening Telegram*, Apr. 17, 1941. All these discussed the matter with reference to the administration by Commission.
 63. J. C. W. Irwin, *Globe and Mail*, May 22, 1941.
 64. F. Noad to Speaker and Members of Legislative Assembly, Mar. 31, 1941, *Hepburn Papers*, OA.
 65. Cooper, Drew and Walsh, *Globe and Mail*, Apr. 10, 1941.
 66. Heenan to Hepburn, *Hepburn Papers*.
- Chapter 18: The Reorganized Department
1. Mr. MacDougall himself refers to the reorganization as lasting to 1946. Memo to R. S. Lambert, Nov. 8, 1965.
 2. ROBERT H. CONNERY, *Governmental Problems in Wild Life Conservation* (New York: Columbia University Press, 1935) p. 174.
- The quoted passage has been underlined, presumably by Mr. MacDougall.
3. Heenan was succeeded by Hipel on May 27, 1941, and MacDougall's appointment was announced June 6, 1941.
 4. Biographical particulars from a publicity release supplied from the office of P. O. Rhynas, Chief, Operations Branch.
 5. F. A. MACDOUGALL, interviewed October 20, 1965 by R. S. LAMBERT and P. PROSS. This was one of four interviews with him dated as follows: August 25, 1965 by H. V. NELLES and L. WAISBERG; September 22, 1965 by R. S. LAMBERT and P. PROSS; April 6, 1966, by R. S. LAMBERT and P. PROSS. Supplementary information was supplied by F. A. MacDougall on November 2 and 8, 1965 in the form of memoranda to R. S. Lambert.
 6. F. A. MACDOUGALL, interviewed August 25, 1965.
 7. F. A. MACDOUGALL, interviewed October 20, 1965. Also his memo to R. S. Lambert, November 2, 1965.
 8. F. A. MACDOUGALL, interviewed October 20, 1965.
 9. Memo re Press Relations, March 11, 1947.
 10. F. A. MACDOUGALL, interviewed August 25, 1965.
 11. F. A. MACDOUGALL, interviewed October 20, 1965.
 12. F. A. MACDOUGALL, interviewed August 25, 1965.
 13. J. B. THOMPSON, *Operations Branch History, 1940-1949*, (Toronto: DLF, mss, May 11, 1954) p. 8. Thompson was the statistician in question.
 14. Memo F. A. MacDougall to R. S. Lambert, November 2, 1965.
 15. AR, 1942, p. 57.
 16. Memo F. A. MacDougall to R. S. Lambert, November 2, 1965.
 17. *Ibid.*
 18. CONNERY, *op.cit.*, p. 164, quoting Secretary of the Interior Wilbur, March 1932.
 19. Provincial Auditor, *Department of Lands and Forests: Examination of Accounts (Parks,*

- Forestry, Reforestation and Miscellaneous Revenue Relating to Revenue*, December 31, 1941.
20. AR, 1942, p. 57.
 21. Memo F. A. MacDougall to R. S. Lambert, November 2, 1965.
 22. *Background of the Modern Department* (Toronto: DLF, mss, n.d.) p. 12.
 23. AR, 1942, p. 56. A fourth section, "Forest Codes", was listed, but seems to have been inoperative.
 24. *Background of the Modern Department*, p. 12.
 25. AR, 1942, p. 60.
 26. *Ibid.*, p. 55.
 27. F. A. MACDOUGALL, interviewed September 22, 1965. Some idea of Zavitz' preoccupation with reforestation is gained from the interview with him and from his *Recollections* (Toronto: DLF, 1965). An idea of Zavitz' position as a legendary figure is gained from J. C. DILLON, "Our First Fire Ranger", *Sylva*, vol. 15 (1960), no. 4, pp. 16-17.
 28. AR, 1942, p. 61.
 29. *Ibid.*, p. 62.
 30. *Background of the Modern Department*, pp. 2-4.
 31. T. E. MACKEY, *One Hundred Years of History—Forest Protection* (Toronto: DLF, mss., 1965), p. 48.
 32. AR, 1942, p. 57 and *Background of the Modern Department*, pp. 20-23.
 33. AR, 1942, p. 39.
 34. S. DRABEK, *Report on Lands Branch*, (Toronto: DLF, mss., 1965) p. 90.
 35. *Background of the Modern Department*, p. 23.
 36. *Ibid.*, p. 12 and AR, 1942, pp. 22, 57.
 37. AR, 1942, p. 57.
 38. *Background of the Modern Department*, p. 16.
 39. THOMPSON, *op.cit.*, p. 9.
 40. *Ibid.*, p. 10. F. A. MACDOUGALL, interviewed October 20, 1965. Memo to R. S. Lambert, November 2, 1965. The reference to the contents of Circulars 1 and 2 is open to question and cannot be verified, as the numbering of the first circulars is erratic.
 41. THOMPSON, *op.cit.*, p. 16.
 42. AR, 1942, p. 60.
 43. I.C. 8, July 24, 1941.
 44. F. A. MACDOUGALL, interviewed April 6, 1966.
 45. F. A. MACDOUGALL, interviewed October 20, 1965.
 46. THOMPSON, *op.cit.*, p. 77, and Memo from F. A. MacDougall to R. S. Lambert, November 2, 1965.
 47. W. DARBY, H. E. PEARSON, W. E. HOOD, E. G. HENRIKSON and L. L. RAWN, interviewed by R. S. LAMBERT and P. PROSS at Fort Frances, May 26, 1965. Though there was a lack of cooperation within the Department in the field, officers often had to undertake the responsibilities of other Departments. At one time or other Darby built a jail at Atikoken, issued relief money and distributed gasoline ration cards, besides carrying on his own duties in the Forestry Branch.
 48. *Ibid.*
 49. Memo, F. A. MacDougall to R. S. Lambert, November 2, 1965.
 50. *Ibid.* and interview with K. ACHESON, October 15, 1965.
 51. I.C. M15, December 18, 1946.
 52. I.C. 33, September 4, 1941.
 53. Interview with K. ACHESON, October 15, 1965.
 54. I.C. 70 (no date).
 55. I.C. 20, August 5, 1941 (issued August 10, 1941).
 56. I.C., February 1, 1943.
 57. I.C. 35, September 4, 1941, and I.C., December 12, 1942.
 58. I.C. 2, August 5, 1941.
 59. I.C. M6, April 13, 1944.
 60. Interview with K. ACHESON; Messrs. BOULTBEE, BALKWILL and HENRY, interviewed by R. S. LAMBERT and P. PROSS at Fort Frances, May 27, 1965.
 61. I.C. M16, December 19, 1946.
 62. F. L. HALL interviewed by P. PROSS, March 2, 1966.
 63. Messrs. G. MCCORMICK, F. B. EVANS, L. H. ECKELS, G. M. SMALL interviewed by R. S. LAMBERT and P. PROSS, on May 25, 1965.

- See also *A History of Sault Ste. Marie Forest District* (Toronto: DLF, 1965).
64. Interview with K. ACHESON.
 65. The following is drawn largely from job specifications for the position of District Forester filed in Personnel Branch and from interviews with field staff.
 66. *Consolidated Statutes, Canada*, 1859, c. 11. 4, 5, 27-34 Schedule B; 41 Vict. c. 2, 19 (1878) and 3-4 Geo. V, c. 3, 701 (1913).
 67. *History File*, Civil Service Association of Ontario (hereafter cited as CSAO) "Report of the Sub-Committee on Salaries", submitted Jan. 16, 1920; clipping, *Toronto Mail*, Jan. 7, 1928 and CSAO, *Civil Service News*, Sept. 1943, p. 2.
 68. 41 Vict. c. 2, 26. Also *Memos, Regulations, Patents Office*, "List of Gratuities paid to Ontario Civil Service Officers, 1869-1898", p. 181.
 69. AR, 1917, pp. xii-xiii; 7 Geo. V, C. 54 (1917) and *JLAO*, 1939-40, App., p. 114.
 70. Interview with W. W. TWEED, Personnel Officer and Ontario Royal Commission on Forestry, *Report*, (Toronto: King's Printer, 1947) p. 97.
 71. J. B. THOMPSON, *op.cit.*, pp. 6-8.
 72. AR, 1946, p. 78.
 73. Records, Personnel Branch.
 74. *Kennedy Report*, p. 31.
 75. Department of Lands and Forests, *Statistical Reference of Lands and Forests Administration*, 1963, p. 110. (Hereafter cited as *Statistics*.)
 76. *Ibid.*, p. 110.
 77. A permanent employee is one appointed by Order in Council of the Lieutenant Governor in Council, on the certification of the Civil Service Commission. A continuous temporary employee is one appointed by the Minister on the certificate of the Civil Service Commission and for a period of not more than one year at a time. A casual employee is one employed for a specific job as needed.
 78. *Statistics*, p. 110 and I.C. 5, no. 76, 1946-47, issued November 25, 1946.
 79. I.C., 1952-53, O.P. 5, issued May 8, 1952.
 80. File, Personnel Branch, Table: Junior Forest Ranger Programme 1947-63, AR 1964, p. 235 and I.C., 1953-54, O.P. 22, issued June 24, 1953.
 81. J. B. THOMPSON, *Ontario Forest Ranger School* (Toronto: DLF, mss., 1954) "Narrative" p. 5 (hereafter cited as Thompson, *F.R.S.*).
 82. THOMPSON, *F.R.S. Agreements and Orders in Council*, p. 24 and History of the Ontario Forest Ranger School (Scrapbook) "Brief History of the Ontario Forest Ranger School" by Q. F. HESS, Director (March 10, 1961).
 83. AR, 1961, Sec. 8, p. 4.
 84. AR, 1956, Sec. 7, p. 13; AR, 1958, Sec. 7, p. 11 and I.C., 1951-52, O.P. 17. Issued June 15, 1951.
 85. I.C. 5, 1949-50, no. 121. Issued Dec. 2, 1949 and AR, 1950, p. 100.
 86. *Statistics*, p. 111.
 87. I.C. 5, 1949-50, no. 152. Issued Feb. 10, 1950.
 88. I.C., 1941-44, no. 180. Dated April 30, 1942.
 89. *Kennedy Report*, p. 97.
 90. Civil Service Commission, Classification Schedules, 1947; 1965; I.C. 5, 1948-49, no. 192. Issued Oct. 29, 1948. I.C., 1950-51, no. 110. Issued Nov. 20, 1950.
 91. Civil Service Commission, *Report*, 1919, p. 13.
 92. *Ibid.*, 1961, p. 22.
 93. AR, 1961, Sec. 8, p. 1.
 94. *Statistics*, 1963, p. 110.
 95. Ontario Regulations, 1948, 36/48, p. 807.
 96. GEORGE J. WOOD, "The Ontario Public Service Grievance Board and the Grievance Procedure", an essay for a course in the U. of T., March, 1965.
 97. List prepared by the CSAO in possession of George Wood.

Chapter 19: Managing the Forest

1. T. SOUTHWORTH and A. WHITE, *A History of Crown Timber Regulations*, p. 224.
2. AR, 1942, p. 7 and F. A. MacDougall to W. G. Thompson, Minister, Oct. 22, 1945, *Deputy Minister's Papers*. The general manpower situation is discussed *passim* in *The Canadian Forestry Situation, 1944: Reports and Papers Presented to the Thirty-Sixth Annual Meeting of the Canadian Society of Forestry Engineers* (Toronto: CSFE, 1944).
3. See Technical Circular 90, p. 6-7; Information Circular 4, July 24, 1941, and Memo F. A. MacDougall to R. S. Lambert, November 2, 1965. The function and organization of the Circulars and Bulletins are discussed in the Bibliography. In the interests of brevity they will be cited henceforth as either I.C. or T.C. with the number allotted by the Department and wherever possible, the date of compilation.
4. I.C., July 2, 1941.
5. I.C., Nov. 3, 1942.
6. *Ibid.*, and T.C. 98, Feb. 2, 1946.
7. T.C. 84, Dec. 3, 1945.
8. T.C., Nov. 3, 1942.
9. See I.C.'s and AR's for the period.
10. T.C. 84, Dec. 3, 1945.
11. This theme occurred repeatedly during the hearings of the 1939 Select Committee. See especially the evidence of Charles Vining, President, Newsprint Association of Canada, *JLAO*, 1941, App. 1, p. 189.
12. T.C. 117, April 9, 1946.
13. F. A. MacDougall to W. G. Thompson, Minister, Oct. 3, 1945.
14. Legislative Assembly, *Debates*, 1946, pp. 53 ff. and Memo. F. A. MacDougall to R. S. Lambert, Nov. 2, 1965.
15. *Debates*, 1945, Feb. 22, pp. 225-226. See also P. O. Robinson, *ibid.*, 21 Mar., 1945, p. 2048; *Statute Law Amendment Act* 8 Geo. VI, c.58 (1944) s.4 and *Statute Law Amendment Act* 10 Geo. VI, c.89 (1948) s.20(6).
16. AR, 1938, 1940, 1942, Lake Sulphite Agreements, Great Lakes Paper Agreement, Spruce Falls Renewal; F. J. Sensenbrenner to M. F. Hepburn, August 23, 1940, "Lands and Forests File", *Hepburn Papers*; "Great Lakes File, 1940", *ibid.*, which contains numerous letters and telegrams to Hepburn from E. E. Johnson and others relating to sawlog supplies for his Lakehead Mill; interviews with G. Wardrope, F. A. MacDougall and J. Barron and Ontario Royal Commission on Forestry, *Report* (Toronto: King's Printer, 1947) Ch. IV and pp. 183 ff. (henceforth referred to as *Kennedy Report*).
17. HON. L. FROST interviewed by R. S. LAMBERT and P. PROSS, Nov. 30, 1965, and F. A. MACDOUGALL interviewed by R. S. LAMBERT and P. PROSS, Oct. 25, 1965.
18. Letters Patent for the Commission were issued on April 16, 1946, but Kennedy had begun work on March 11 (*Report*, pp. 11-15).
19. GENERAL KENNEDY interviewed by P. PROSS, Jan. 3, 1966. Kennedy was appointed to "investigate, inquire into and report upon the forest resources of Ontario and their conservation, management, development and beneficial utilization for all purposes, including but without limiting the generality of this reference the following subjects:
 - (a) the extent, nature and value of the forest resources;
 - (b) the methods employed in forest operations heretofore carried on and the forest conditions resulting therefrom;
 - (c) the improvement of methods of planting, developing, cutting, manufacturing and otherwise utilizing forest trees, the marketing of forest trees and the products thereof, and the development of new products;
 - (d) the closer integration of the various types of forest operations and of the industries utilizing forest products;
 - (e) the relation of forestry and forest industries to other basic industries, particularly farming;
 - (f) the relating of forestry to soil conservation;
 - (g) the status of woodsmen with particular regard to wages, working and living conditions and the development of forest colonies;
 - (h) the education and training of forest

- engineers, forest rangers, scalers and inspection personnel generally; (i) the education of the public as to the importance of the forests and woodlots in the social and economic life of the Province; (j) reforestation and research; (k) the maintenance of an adequate forest-cover with a view to the regulation of moisture run-off and the maintenance of levels of lakes and streams; (l) waterways and waterpower with relation to forest operations and the manufacture of forest products; (m) the statutes, orders and regulations under which forest lands are now administered and licensed or made available to private enterprise; (n) the supervision and administration of lands, forest operations and industries utilizing forest products by the Department of Lands and Forests; (o) all other aspects of forestry; and (p) all relevant facts relating to any matter into which, in the opinion of you Our said Commissioner, it is necessary to inquire . . ."
20. *Kennedy Report*, p.183 ff; GENERAL KENNEDY, HON. L. FROST and F. A. MACDOUGALL interviewed, *op.cit.*
 21. *Kennedy Report*, p. 179.
 22. *Ibid.*, pp. 9-25, *passim*.
 23. *Ibid.*, pp. 178 ff.
 24. *Ibid.*, Ch. XXI.
 25. Legislature, *Debates*, 1948, pp. 9, 266-268, 368, 1096 ff.
 26. Department, Timber Branch, *Recommendations and Answers*, No. 71.
 27. *Ibid.*
 28. D. ROGERS interviewed by P. PROSS, Jan. 4, 1966.
 29. Interview, Jan. 3, 1966.
 30. T.C. 97, Feb. 4, 1946 and *Sylva*, Vol. 2 (1946) No. 1, p. 1.
 31. T.C. 84 and T.C. 108, Feb. 26, 1946.
 32. *Ibid.*; *JLAO*, 1941, App. 1, pp. 381 and 742, and T.C. 91, Jan. 3, 1946.
 33. AR's 1947-1951; J. A. BRODIE, "Ontario Has Its Picture Taken", *Sylva*, Vol. 2 (1946), No. 3, pp. 51-56, G. WOOD interviewed by P. PROSS, April 1, 1966.
 34. See particularly, *Reports, 1946-48 by Professor D. M. Matthews* (Toronto: DLF, 1964) a commemorative volume of Prof. Matthew's reports to the Department.
 35. T.C. 90, pp. 7-8.
 36. See for example, the Agreement with the Pulpwood Supply Company, Dec. 24, 1936, ss.7-10, AR 1937, p. 95, and J. F. Sharpe, Chief Clerk, Woods and Forests Branch, at the hearings of the Select Committee of 1939-40, *JLAO*, 1941, App. 1, pp. 381-385.
 37. T.C. 91.
 38. F. A. MacDougall, Memo, Jan. 14, 1946.
 39. Agreement with Abitibi Power and Paper Company Limited, (re Fort William Concession), March 29, 1946, s.15 a. AR 1946, p. 166.
 40. *Ibid.*, s.15.
 41. Ontario, Legislative Assembly, *Votes and Proceedings*, 1947, Throne Speech, p. 9, and *Debates*, p. 625.
 42. Ontario, Statutes, 11 Geo. VI (1947) c.24 and 11 Geo. VI (1947) c.38.
 43. AR, 1946-47, p. 155. See also DLF *Manual of Timber Management* (Toronto, 1948).
 44. AR 1947-1948, p. 81.
 45. *Ibid.*, 1950-1951, p. 150.
 46. *Ibid.*, 1946-47, p. 155; 1948-49, p. 162-163; 1949-1950, p. 150; 1950-51, p. 137 and Circular TM 14, May 26, 1949.
 47. AR, 1950-1951, p. 137; J. F. SHARPE, "Progress of Forestry in Ontario", Society of American Foresters, *Proceedings*, 1947, pp. 492-504, p. 502, and A. P. MATIECE, Pembroke District Staff interviewed by P. PROSS, Jan. 4, 1966.
 48. AR, 1953-54, p. TM-2.
 49. *Ibid.*, 1962-63, p. 285; 1963-64, p. 280 and Timber Branch memo to P. Pross, March, 1966.
 50. Ontario, *Statutes: 1952*, c.15 and AR, 1952-53, p. 192. The Crown Timber Act has been amended since 1952 and is now cited as R.S.O. 1960, c.83, amended by 1961-62, c.27 and 1964, c.16.
 51. Legislature, *Debates: 1954*, (March 29, 1954),

- p. 905 ff, and "White Paper", *Suggestions for Program of Renewable Resources Development*.
52. "White Paper", p. 2.
 53. *Ibid.*, p. 4.
 54. *Ibid.*, p. 5.
 55. *Ibid.*, pp. 5-11.
 56. *Ibid.*, p. 12.
 57. *Ibid.*, p. 15.
 58. *Ibid.*, pp. 15-18.
 59. *Ibid.*, pp. 19-20.
 60. AR, 1956-1957, 1957-1958, 1958-1959, 1962-1963.
 61. *Ibid.*, 1964, p. 268; Timber Branch, Memo to P. Pross, March, 1966 and Timber Branch. "Estimated Regeneration Requirements on Crown Land for Fiscal Year, 1966-67".
 62. Except where otherwise stated, the information contained in the following pages is drawn from F. ROBINSON, *The Forest Resource Base of Ontario* (Forestry Study Unit, mss., 1966); D. P. DRYSDALE, *What must be done to ensure that Ontario's forest resources meet 1975 and 2000 demands effectively* (Timber Branch, mss., 1966) and J. A. BRODIE, *Highlights of the Annual Meeting* (Panel discussion, 57th Annual Meeting of the Canadian Institute of Forestry, Fort William, Ontario, October, 1965). As all of these are manuscripts held by the Department they are not readily available. However, further information will be found in the Department's *Reports*, and various publications on the Forest Resources Inventory, particularly R. M. DIXON's *The Forest Resources of Ontario* (Toronto: DLF, 1963), in professional journals, Royal Commission studies, such as that of the Royal Commission on Canada's Economic Prospects, and in the proceedings of conferences such as the Resources for Tomorrow Conference of 1961.
 63. In addition 18 billion cubic feet of conifers and 4 billion cubic feet of hardwoods are estimated to be available in the economically inaccessible regions.
 64. Timber Branch, "Estimated Regeneration Requirements . . ."
 65. See ROBINSON, *op.cit.*, DRYSDALE, *op.cit.*, and Timber Branch, Memo to P. Pross, April, 1966.
 66. Under the Agricultural Rehabilitation and Development Act (ARDA), *Statutes of Canada* 9-10 Eliz. II, c.30 (1961).
 67. *The Woodlands Improvement Act*, 1966, and OLA, *Debates* (Daily Edition) Wednesday, March 2, 1966, pp. 1072-1076.
- Chapter 20: Modern Land Management
1. Many of the decisions referred to in this and subsequent paragraphs have been touched upon and documented in Chapters 17, 18 and 22. Further details will be found in the DLF, *Reports* for the period; in S. DRABEK, *Modern Land Management: Decentralization and Land-Use Planning* (DLF, mss., 1966); P. PROSS, *The Re-organization of the Department—1941* (DLF, mss., 1966); Technical Circulars and Bulletins, particularly T.C. 90 compiled Jan. 8, 1946; Ontario Royal Commission on Forestry, *Report* (1947); OLA Select Committee on Conservation, *Report* (1950); A. H. RICHARDSON, *The Ganaraska Watershed Report* (1944 and 1946); and DLF *Suggestions for a Program of Renewable Resources Development* (1954 "White Paper").
 2. See *JLAO*, 1941, App. 1, pp. 30-31 and 59-60 and ARs of 1943 and 1944.
 3. AR, 1944, p. 47.
 4. AR, 1946, p. 58.
 5. AR, 1943, pp. 41-43.
 6. 14 Geo. VI, c.63 (1950).
 7. *JLAO*, 1941, App. 1, p. 31.
 8. AR, 1953, Division of Lands and Recreation.
 9. AR, 1960, Lands and Surveys Branch, pp. 16-17.
 10. AR, 1962, p. 172.
 11. 9 Eliz. II, c.81 (1960-61).
 12. AR, 1965, p. 140; *Statistical Reference of Lands and Forests Administration, 1964*, pp. 75-76; IB L-1-2 re "Public Agricultural

- Lands Committee" issued July 8, 1963; E. L. WARD interviewed by S. DRABEK, May 16, 1966.
 13. B. E. FERNOW, *Conditions in Clay Belt of New Ontario* (Ottawa: King's Printer (Commission of Conservation) 1913) p. 9.
 14. AR, 1946, p. 57.
 15. A. H. RICHARDSON, *The Ganaraska Watershed Report* (First ed. DLF, 1944. Second ed. Dept. of Planning and Development, 1946) and OLA Select Committee on Conservation *Report* (Toronto: King's Printer, 1950).
 16. Select Committee on Conservation, *op.cit.*, p. 83.
 17. *Ibid.*, p. 154.
 18. AR, 1955; *The Public Lands Act*, R.S.O., 1960, c.324, ss.2(a), 15 (1).
 19. Ontario Royal Commission on Forestry, *op.cit.*, p. 170.
 20. *Ibid.*, p. 171.
 21. See Chapter 22.
 22. See *Glackmeyer Report* (DLF, Research Supplement VI—Principles and Methods Required for Planning the Multiple Use of Land in the Glackmeyer Development Area, p. 206. Also: G. A. HILLS, *The Ecological Basis for Land-Use Planning* (DLF, Research Branch, Research Report No. 46).
 23. HILLS, *op.cit.*, p. 141.
 24. E. L. WARD, Land-Use Planning Programme (Toronto: DLF, mss., 1961) p. 4.
 25. OLA, *Debates*, 1956, Vol. II, p. 1459 ff. Orders in Council "re recreational planning" (1956), "re extending recreational planning to all districts" (1957).
 26. Order in Council "re District Advisory Committee on Recreational Land Use Planning" No. 289/62.
 27. I.C., L23-1, February 2, 1962, p. 2.
 28. *The Glackmeyer Report on Multiple Land-Use Planning*, p. 1.
 29. *Ibid.*, pp. 2, 15.
 30. *Ibid.*, pp. 25-27.
 31. *Ibid.*, p. 31.
 32. Interview with E. L. Ward, *op.cit.*
 33. AR, 1963, pp. 163-164.
 34. I.C., L13-1. Issued Nov. 5, 1962.
 35. J. W. KEENAN, *Land Use Plan for Tweed Forest District* (Toronto: DLF, 1964).
 36. See above, p. 429.
 37. OLA, *Debates*, December 6, 1962, p. 144.
 38. E. B. MACDOUGALL, *A Study of Land-Use in Victoria County*, unpub. Master of Science (Forestry) Thesis, University of Toronto, 1962, p. 112.
- Chapter 21: Fish and Wildlife Management
1. C. H. D. CLARKE, "Wildlife in Perspective", *Resources for Tomorrow*, (Ottawa: Queen's Printer, 1961) p. 838. See also DOYLE, MARTIN, *Hints on Emigration to Upper Canada* (Dublin, 1834) p. 92.
 2. E. E. PRINCE, *Fifty Years of Fish Administration in Canada*, American Fish Society, *Transactions*, vol. 50 (1921), pp. 168-169.
 3. Ontario Game and Fish Commission, *Report*, 1892, (Toronto, 1892) p. 189.
 4. *Ibid.*, pp. 196-198.
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There are two other major fields that are not dealt with in this bibliography, primarily because they are little mentioned in the history. Thus those administrative activities, such as mines administration, that are now carried on by other departments are not discussed and only scant reference is made to items relating to the "pre-amalgamation" history of fish and wildlife branch.

GENERAL

General histories of Ontario are few, and usually mediocre. Adam Shortt and A. G. Doughty, *Canada and its Provinces: Province of Ontario* (Toronto, 1913-1917. 23 volumes, volumes 17 and 18) is the most useful study. J. E. Middleton and F. Landon, *The Province of Ontario 1615-1927* (Toronto, Dominion Publishing Co., 1927. 4 volumes), draw largely on already published sources. The treatment is generally inadequate, as is that of A. Fraser, *History of Ontario* (Toronto, 1907, 2 volumes). In comparison the flavour of William Canniff's *History of the Settlement of Upper Canada* (Toronto, 1869) gives it far more value despite many failings in scholarship. The modern writer best able to impart the same sense of the times is E. C. Guillet, whose works include *Early Life in Upper Canada* (Toronto: University of Toronto Press, 1963), *The Valley of the Trent* (Toronto: Champlain Society, 1957) and *The Pioneer Farmer and Backwoodsman* (Toronto: University of Toronto Press, 1963). G. Craig's *Upper Canada: The Formative Years, 1784-1841* (Toronto: McClelland and Stewart, 1963) is the best history of the Province to 1841. The years of Union are documented in J. E. Hodgetts, *Pioneer Public Service* (Toronto: University of Toronto Press, 1956), D. Creighton, *The Empire of the St. Lawrence* (Toronto: Macmillan, 1956), J. Dent, *The Last Forty Years: Canada since the Union of 1841* (Toronto, 1881), C. Martin, *Foundations of Canadian Nationhood* (Toronto: University of Toronto Press, 1955), D. Creighton, *John A. Macdonald: The Young Politician* (Toronto: Macmillan, 1952) and J. M. S. Careless, *Brown of the Globe* (Toronto: Macmillan, 1959-63, 2 vols.). Shortt and Doughty,

(*op. cit.*), J. W. Biggar, *Sir Oliver Mowat* (Toronto, 1905, 2 volumes) and Sir. G. W. Ross, *Getting into Parliament and After* (Toronto, 1913) are probably the best printed sources of the province's political history between Confederation and 1905. The memoirs of two members of the short-lived "Farmers' Government", W. C. Good, *Farmer Citizen* (Toronto: Ryerson Press, 1958) and E. C. Drury, *Farmer Premier* (Toronto: McClelland and Stewart, 1966) are the only such items printed since Ross's autobiography. Unpublished studies and articles are referred to below. Two other worthwhile studies are R. L. Jones, *History of Agriculture in Ontario, 1683-1880* (Toronto: University of Toronto Press, 1946) and J. Spelt, *Urban Development in South Central Ontario* (Assen, The Netherlands: Van Gorcum, 1955). A fair sample of early travellers' accounts of Upper Canada is found in G. Craig's (ed.) *Early Travellers in the Canadas* (Toronto: Macmillan, 1955) which contains a bibliography.

SPECIAL TOPICS

(a) *Bibliographies*

Various general bibliographies of Ontario history include: W. Kingsford, *Early Bibliography of the Province of Ontario* (1892); F. M. Staton and M. Tremaine, *Bibliography of Canadiana* (Toronto Public Library, 1934) and its 1960 supplement by G. M. Boyle and M. Colbeck; Public Archives of Canada, *Manuscript and Record Inventories*; Ontario Archives, *Reports*; R. L. Jones, *History of Agriculture in Ontario, 1683-1880*; J. Spelt, *Urban Development in South Central Ontario* and G. Craig, *Upper Canada: The Formative Years*. Bibliographies of Ontario Government publications include Queen's Printer, Ontario, *Catalogue of Publications Issued by the Government of Ontario* (Toronto, 1916 and 1917), H. I. MacTaggart, *Publications of the Government of Ontario, 1901-1955* (Toronto: University of Toronto Press, 1964) and *Canadiana* (Ottawa: National Library of Canada) which has listed Ontario publications since 1955. The U.S. Forest Service (E. Munns, com.) has published a two-volume *Select Bibliography of North American Forestry* which includes entries for Canada. Articles on forestry will be found through the Forestry Abstracts. Similar bibliographies and series of abstracts cover the other disciplines touched upon in the history.

(b) *Departmental Records*

A brief explanation of the structure of the Department's records system is necessary to the effective use of those records still in existence. Early records suggest that until the appointment of a Commissioner of Crown Lands, who was also Surveyor-General of Woods and Forests, the various officers administering the Crown lands had considerable autonomy. Once the Commissioner was entrenched as the head of a Department that co-ordinated their various activities, the management of Departmental records began to reflect an increasing degree of centralization. All letters were directed to the Commissioner himself and at times he would allow no one else to open them. He usually inspected them and sent them to the Registrar of the Department. The Registrar noted receipt of the letter, the person sending it, a brief note of content, date received, and the person assigned to deal with it. Once the correspondence reached the branch, a reply was drafted and sent back to

the Commissioner for his signature. The Registrar noted the sending of the letter and had a copy made. Consequently, the Registrar's office became the repository for all correspondence to and from head office. (see *Registers of incoming letters*, 1837-1875). This correspondence was divided into various segments such as *Letters received by the Commissioner*, which would usually consist of a precis of the letter, and *Letter books of the Commissioner*, complete copies of letters sent. Letters to and from agents were kept separately and according to agency. It is not certain whether these volumes were managed by the Registrar or the Branch concerned.

There is no doubt, however, that each branch maintained its own records of Reports to Council and Orders in Council on matters relating to its jurisdiction. The key to each Branch's activities was the governing statute (such as the Crown Timber Act) and the regulations passed under it. The more important regulations were kept in their printed version and no record is available to show how these were determined and legislation drafted. However, when less important policy decisions were involved the Branch's *Report Books* and *Order in Council Books* were used to record the reports to the Executive Council and the Orders in Council that resulted. The Orders had general and specific application and the volumes served as the policy guide for the branch. They were frequently searched for precedents and were quite well indexed both as individual volumes and as a collection.

These were the vital records kept by each Branch, but a series of other volumes were maintained to provide information on day to day routine and relatively unimportant matters. Thus *Scrapbooks* belonging to each branch range in content from printed copies of regulations to examples of licences, routine instructions to agents, notices of timber sales, or settlement duties and so on. A few held material from other countries, such as reports of British parliamentary inquiries into forestry. Other volumes such as *Statement Books* usually contained copies of returns to the Legislature, while numerous ledgers and account books itemized the transactions of the Branch.

During this period a Records Branch appears to have been organized. The Branch used the Victorian docket filing system, but the introduction of the typewriter and the increased volume of business that followed the opening of the north to settlers, the construction of the Ontario Government railway and the discovery of new mining fields necessitated a new method. After 1916 the dockets were gradually converted to flat files and a new form of registration of incoming letters with suitable cross indexing was adopted.

Because the land surveyed and unsurveyed still in the Crown carried the timber, pulpwood, minerals and water power rights and by its description located any or all of these, the Records Branch was in practice a part of the Lands Branch, but it served all branches. A timber operation, a land problem, a water power project, a forest fire could easily occur on any area at the same time, to say nothing of the staking of a mining claim as well. As separate files on any one area, whether a surveyed lot or not, might unwittingly duplicate privileges and thus lead to confusion and embarrassment, the flat filing system was based upon the geographic surface. This meant that inquiries or applications for land would be related to the particular file involved and quickly reveal the actual position of the particular area.

In the Records Office, at the time of its transfer to the Division of Operations and Personnel in 1941, there were about 125,000 flat files, some of which consisted of several volumes, and many of them in almost constant use. Back of these were thousands of the old docket files, subject to conversion to flat files as they came forward in the process of routine business.

At present the Department's central records office maintains the basic filing system just described while each individual branch keeps a series of separate files on matters which pertain to its own activities and cannot be incorporated easily into the central filing system. The system of filing used varies from one branch to another, although most branches maintain a descriptive list of the main features of their files. In addition, individual officers of the branches frequently keep their own files on matters almost exclusively under their jurisdiction.

The records of the field organization were kept somewhat differently. The first agents often maintained very few records and even after some measure of standardization was imposed there was a good deal of variation in practice from one agency to another. Usually each agent kept account books and letter books, together with various ledger books that recorded the activities that were his particular concern. A good deal of this material was duplicated at head office. The various consolidations of the field service have not altered the basic structure of this system.

The following summary attempts to refer to the more important collections of documents that relate to the Department in general and to the administration of Crown lands and forests.

(i) *General Policy*

The Calendars and Inventories of the PAC provide a useful guide to the documentary material concerning the period prior to responsible government. The more important collections deserving examination are (1) Series Q—Quebec, Lower Canada and Upper Canada, 1760-1840. Calendars of these papers are in the PAC annual reports, 1891 to 1901 and 1943 to 1945; (2) CO 42, Canada, 1700-1922; (3) CO 43, Entry Books, 1763-1873—which includes a number of letter books on domestic and colonial matters; (4) CO 47, Canada Miscellaneous, 1764-1866; (5) Record Group 1—State Records of the Executive Council, 1797-1867; and (6) Record Group 5, Records of Provincial and Civil Secretaries' Offices, U.C. and C.W.

Because the Crown Lands Department was concerned with either land or timber administration, much "general departmental" material is more usefully treated under one of those headings. However, a few documents can be mentioned here. Amongst these are the Departmental *Registers* of letters received, such as *Letters Received; 1789-1877*, and *Account Books* which deal chiefly with land sales. The *Extracts from Minutes of Council, 1799-1871* (O.A.) contains some printed notices of general interest, *Memos* (July, 1899 to March, 1900) (O.A.) consists of communications from the Assistant Commissioner to the Commissioner and a similar volume (*Memos to Minister* (O.A.) covers the period December, 1909 to June, 1911, and *Scrap Book—Miscellaneous* (O.A.) contains a variety of clippings, regulations, minutes and memos from the years 1794 to 1909, as does a volume entitled *Regulations and Memoranda, 1899*, (DLF—Research Branch).

There appear to be very few general records of the period 1900 to 1940, but the post-1941 years are well documented in the Department's Information Bulletins and Technical Circulars (LF-O). These have been classified as follows:

Information Circulars—

Designed to promulgate essential or informative facts throughout the Department.

Main Office Circulars—

Designed to provide overall directives.

Branch Circulars

Designed to provide each Branch with its own particular directives so that they might be readily indexed, maintained and available as required.

Technical Circulars—

A form of information on technical subjects.

Considerable documentary material is available in the papers of Mr. F. A. MacDougall, particularly in items such as *Policy Decisions: 1948*, a small volume that lists, on a branch by branch basis, the major decisions taken during the period of office of Hipel, Thompson and Scott, and in items such as *Memoranda to the Minister (1945-1947)*. Another source of documentation regarding policy is the Minister's Advisory Council files (LF-T).

The Branch files of the Department contain much material concerning general policy. Since 1941, too, the Department has issued a great variety of publications, many of which have contained policy outlines (see below).

(ii) *Lands and Surveys Branch Records*

The Ontario Archives holdings of the early Crown Lands Department office records (formerly known as the Crown Lands Papers) are quite extensive and are organized as Record Group I. The Archives is preparing an inventory of the record group entitled *Records of the Department of Lands and Forests and its predecessor, The Crown Lands Department, in the Provincial Archives: RG1*. Among the more important items in the collection are the records of the Commissioner's correspondence (*Letters received by the Commissioner, 1788-1912; Letter books of the Commissioner, 1829-1874*). In *Reports to the Commissioner, 1845-1859* are reports on settlements and accusations of fraud against agents. The *Commissioner's Reports 1832-1881* consist chiefly of policy recommendations concerning petitions, settlement and surveying. Some miscellaneous policy memoranda have been located, notably "Memorandum re bringing lands into the market and the system pursued" by Alexander Kirkwood, (n.d., OA Pkg. 17 #104), and "Memo re the Land Improvement Fund" (n.d., OA). *Statements 1818-1922* are generally Departmental statements to the Legislature and cover problems such as the Clergy Reserves and the Improvement Fund, while volumes entitled *Miscellaneous* are usually scrapbooks of regulations, printed forms, oaths of allegiance, special projects, and so on.

The work of disposing of Crown lands is traced through the various compilations of fiats, warrants, and Orders in Council (1879-1925) and with *Petitions and Certificates, 1800-1900*. These and more recent entries concerning patents, are at Patents Office, DLF. The Department has, in its Maple Vault, extensive files of township papers organized, like the Records Section files, according to township and lot.

The Maple files generally cover the period 1855-1918 and include the complete files of the Military Lands Branch in its dealings with veterans of the Fenian raids and the Boer War.

The work of the Land Agencies was directed through correspondence, and a number of letter books have been preserved at OA together with other pertinent documents (sales registers, account books, patents registers and so on). Listed under "Accounts Branch" are over 400 volumes of ledgers and records, most of which deal with lands matters. The records of the agencies themselves vary in quality and extent, but some important districts are represented in RG-1. Of these the fifteen volumes dealing with the Simcoe District Agency from 1843-1868 are by far the most complete.

The only recent documents held by OA are the records of the abortive *Relief Land Settlement Scheme, 1939-1940* (5 volumes); all others are held by DLF, Records Section or by the District Offices.

The major part of Surveys Records are held by DLF, although some items are deposited at OA. References should be made to the RG-1 inventory. The papers fall into five main categories: *Surveyor General's Correspondence*, letters to and from the Surveyor General dealing with surveys during the period (approx.) 1792-1867; *Reports and Statements*; *Survey Diaries and field notes* from 1792 to the present; *Inspection Reports* (1794-1913), inspections in various districts; and miscellaneous items such as instructions to surveyors in Crown (1764-1962) and Municipal (1851-1944) surveys. A brief historical sketch of "Land Surveys in the Province of Ontario" (mss., n.d.) prepared by C. H. Fullerton, former Surveyor General, is held by Surveys Section.

(iii) *Timber Branch Records*

(a) Head Office:—

The Woods and Forests Branch, established in 1852, consolidated the Department's timber administration activities and assumed responsibility for the previously established cullers' office at Quebec City and the agency at Bytown. The chief head office records of the Branch until quite recent times were the Woods and Forests, *Orders in Council* (5 volumes—I: 1847-1867; II 1868-1897; III: 1901-1931; IV: 1931-1939; and V: 1939-1959) and Woods and Forests, *Report Books* (4 volumes—I: 1851-1876; II: 1877-1901; III: 1902-1910 and IV: 1910-1936). Although most contain an index that is reasonably useful, finding aids to all the volumes are: *Special Cases*, an index of special cases from 1890-1910 (OA) and *Record of Special Cases* (DLF-T) covering the period from Confederation to 1900. By pasting typewritten copies of Orders, memoranda and so on, into these volumes they were kept in use long after the introduction of the typewriter and the flat filing system. Consequently, many items are of recent origin.

General policy was also recorded, less systematically, in other volumes, some of which apparently were put together as personal guides for the Assistant Commissioner or the Head Clerks. Thus *Crown Lands Papers: Collection of Printed Returns and Articles re Land and Timber, 1840-1900* (OA) includes some comparative material and a few memoranda; *Scrap Book No. 1 (1882-1909)* and *No. 2 (1900-1911)* (OA) contain printed notices, samples of licenses, etc.; *Scrap Book, Miscellaneous*

1794-1909 (OA Shelf 47, No. 9) holds numerous clippings, regulations minutes, memos on all aspects of the Department's work as does the collection of *Regulations and Notices* (OA Shelf 57, No. 14) and the *Regulations and Memoranda, 1889* (OA). The envelope on *Memos re timber* (OA CLP, Shelf 57, No. 16) contains, in particular, a memo regarding the advantages of sawn over square timber (undated and incomplete) and a memo on a trespass case (Aug. 30, 1873). Another on *Timber Memoranda* (OA CLP, Shelf 57, No. 17) includes clippings on forest resources (1889); draft for an annual *Report*; a settlers' petition re conflict with lumbermen and part of a long report on the petition (n.d.) and a map of certain timber limits.

A *Statement Book* (LF-T) has miscellaneous items for 1893 to 1920, with a few references to 1953; usually copies of returns to the House, reports, compilations of annual cut, parts of letter registers for 1896 and 1898, and similar items. Finally, a short series of memoranda from the Assistant Commissioner to the Commissioner between July, 1899, and March, 1900, is to be found in a volume marked simply *Memo Book* (OA).

These items are the most valuable source of policy decisions for the period. The Ontario Archives holds a disappointingly small number of letter-books relating to the head office administration of Woods and Forests. The most complete set of *General Letters Sent* covers 1852 to 1864 as follows: May 8, 1852, to March 31, 1856; July 6, 1858, to August 9, 1859; November 26, 1861, to August 31, 1863 and September 1, 1863 to August 17, 1864. *Letters to Commissioner, 1862-1864* discuss licences as do *Letters to Agents, 1851-1868* and *Letters re timber limits* (CLP Shelf 84, Box 2). *Circulars to Agents: 1855-1881* contains policy statements of general application.

In addition, there exist volumes of registers valuable for statistical purposes, but not used in this study. A complete list of these will be found in the Archives Inventory—"Records of the Department of Lands and Forests . . . RG.I"

The introduction of the auction system led to the setting up of a series of *Timber Sale Books* (LF-T). Twenty four volumes give details of the auctions covering the period 1871 to 1912. Each volume contains a copy of the notice of sale and the terms and conditions. After 1891, when the practice of selling burnt timber had become well established, a series of *Burnt Timber Sale Books* (LF-T) was kept. The first two volumes (1891 to 1911) deal only with sales of burnt over areas, but the final three volumes (1912-1922) contain general sales and seem to be the successors to the *Timber Sale Books*. When the Agreement System of sale was introduced to meet the needs of pulp and paper companies copies of the agreements were entered in various *Order in Council Books* and published in the annual *Reports*.

Virtually the only documentary records remaining of the Bureau of Forestry are the results of a questionnaire to lumber mill owners January 15, 1897 (*Lumber Mills*, OA). These give details of the number of men employed, consumption, markets and so on.

The Ontario Forestry Branch was influential in creating the modern Department and an abundance of materials show what the first foresters wanted to do, but there are few records describing what they actually did do, and how they went about doing it. The Forestry Branch "Report" in each year's Departmental Report is informative but not always completely frank. The only traces of the Branch's existence are

the forests it grew and protected and the insignia it left behind on some pieces of equipment still in the Department's possession. It left no *Report Books*, no *Order in Council Books* and most of its files have been broken up and distributed amongst the branches it spawned. Only a few have been retained intact, in Forest Protection Branch. The *Minute Book* and other records of the Forestry Board are held by Mr. C. R. Mills of Thornhill, Ontario.

The practice of keeping records in folio volumes gradually disappeared after the introduction of the flat filing system and today timber administration files are at four chief locations: the central filing vault, at timber branch and at the two sections of the Branch removed from head office: Silviculture section and Re-forestation section.

(b) Field Organization:—

The timber agency system was begun during Peter Robinson's regime, though only the Ottawa agency and the Quebec office operated until 1854 when other agencies were established at Belleville (Ontario agency); on the Lower Ottawa; in the Niagara Peninsula and the Huron and Superior Territory. The Niagara (or Western) agency was merged with the Huron and Superior agency in 1858 and the latter in turn disappeared shortly after when the whole of the western part of the Province came under the direction of the Toronto office. This office was known as the Western agency and was subdivided into a varying number of sub-agencies. The agencies were intimately involved with administering the various timber regulations and Acts, reviewing licence applications, issuing licences, recording limits, sales, arbitrating disputes, collecting ground rents and dues, supervising wood rangers and so on.

The most complete records of an agency are those of the Ottawa agency, which include a series of letters from the agent to the Commissioner from 1837 to 1900. The sixteen indexed volumes of letters give an extensive picture of the responsibilities and problems of the agency. They are usually entitled *Departmental Letters: Ontario* or *Copying Book to Commissioner* (OA). This series is the most complete in the Ottawa agency records. The abstracts of the Commissioner's letters between May, 1878 and January, 1929 are found in four volumes of *Letters Received, Commissioner* (OA) and a similar series of abstracts or letters received from the general public and the agents' subordinates in the field are found in five volumes covering the periods January, 1865 to November, 1873 and March, 1877 to February, 1888, entitled *General Letters Received* (OA). *General Letters Sent* (OA) are, like the *Letters to Commissioner*, verbatim copies of letters sent. These are eleven volumes covering the periods 1856 to 1876, 1879 to 1882, 1885 to 1889 and 1904 to 1909. Although the various ground-rent journals, settlers' timber books, ledgers and licence returns (OA), are not referred to here, the volume entitled *Disbursements Chargeable to Dominion, Ontario, Quebec, September 1867 to June 1889* (OA) is of interest since it shows the extent of co-operation between the three governments in financing the office. The remaining volumes of general interest in the Ottawa Agency Records include: *Statistics, 1847-1893* (OA), items on timber on the Ottawa, revenue, timber cut from private lands, some memoranda from the Department and from operators; *Instructions for surveys* (OA, 2 volumes 1842 to

1872), instructions and correspondence relating to surveys for timber limits; *Report Book, Surveyor's Branch* (OA, 1846 to 1851), letters regarding timber limits from the Department to the Crown Timber Office and the *Rangers' Report Book* (OA), a few examinations of timber areas from January, 1897 to October, 1899.

The records of the Belleville agency, also at the Ontario Archives, are not as complete as those for the Ottawa office. A *General Letter Book* includes letters sent to the Commissioner and covers the period, November 1855 to September 1872, and the *Register of Letters Received* (1864 to 1878) is similar to those of the Ottawa office. A box of *Letters to J. F. Way* (1862, Shelf 84, Box 3) comprises a series of letters to the agent concerning licences in the District. In addition to these volumes there is a series of account books and registers similar to those used by the Ottawa office.

In 1934 the Timber agencies were amalgamated with the field organization created after 1917 by the Forestry Branch. The latter was begun as a series of inspectorates organized to coordinate fire prevention, and gradually became a network of districts which grew into the District organization in effect today (see Chapters 16 and 18). Unfortunately, the complete records of only one inspectorate (Oba) have been preserved and they are deposited at the chief ranger station at Hornepayne, Ontario. All other records appear to have been entirely integrated with modern district files.

(iv) *Other Branches' Records*

Unpublished records of other Branches are not as accessible as those of the Lands and Timber Branches. In most cases this is because the Branches themselves are of fairly recent origin and most of their files are still in current use. This is true of Operations Branch and Research Branch, though a history of the former (1940-1949) exists (see below) and much of the history of the latter is available in the *Report of the Committee on Research* (DLF. mimeo., 1960). In other cases, such as Parks Branch, certain phases of their work have a considerable history but the files have either been lost or are kept with current files. The early records of Fish and Wildlife Branch are scattered through several Departments and the letter books of one fisheries overseer (F. Kerr) are deposited at the University of Toronto. The remaining records of the Ontario Forestry Branch have been discussed above (see Timber Branch) while many of the Air Service files are at Sault Ste. Marie. Law Branch has extensive records of Orders in Council and regulations in its Patents Office, but few documents record its own history. However, in G. Kennedy, *Alphabetical Digest of Cases Relating to Crown Lands and Cognate Matters* (Toronto, 1891) there is found an outdated, but still useful, beginning for the student interested in describing the legal background of the Department.

(v) *History Committee Records*

The bulk of the material accumulated during the compilation of the history has been turned over to the Department's Patents Office for safekeeping and for the use of students. Certain materials have also been turned over to the Ontario Archives. As an inventory of these has been deposited at both Patents Office and Archives, a lengthy enumeration is not necessary here. However, two types of

material should be mentioned: the research papers that provided the background for many of the chapters and the interviews that were conducted. The background papers are as follows: Accounts, Branch, *The Provincial Land Tax* (1965); S. J. Antonette, *History of Legislation Administered by the Department of Lands and Forests* (1964); P. Beaudette, *Short Papers of the Legal History of the Department* (1965); O. E. Devitt, et. al., *History of Fish and Wildlife Branch* (1965) supplemented by a precis written by Dr. H. H. MacKay and the comments of Dr. C. H. D. Clarke; S. Drabek, *Land Settlement and Land Policy in Ontario* (1965) and *Modern Land Management-Decentralization and Land Use Planning* (1966); K. Evans, *Short Papers on Surveys Section History* (1965); A. R. Fenwick, R. N. Johnston, et. al., *Short Papers on Research Branch History* (1965); T. E. Mackey, *Forest Fire Protection to 1878* (1965), *Forest Fire Protection after 1878* (1965) and *The Air Service* (1965); D. McCalla, *The Department and the Railway Boom* (1965) and *The Rise of Forestry* (1965); D. McConnell, *Provincial Parks, 1893-1954* (1965), *Provincial Parks, 1954 to the Present* (1965) and *History of Personnel Branch* (1965); V. Nelles, *Timber Regulations, 1900-1960*; P. Pross, *Bibliography of the Department of Lands and Forests* (1965), *Timber Regulation, 1792-1850* (1964), *Timber Regulation, 1850-1900* (1965) (N.B.: Both of the latter are primarily bibliographical); *Timber Regulation, 1792-1900* (1966) (narrative); *Timber Management, 1941-1965* (1966) and *The Re-Organization of the Department* (1966); K. B. Turner, *A History of Investigations into and Control of Pests of Forest Trees in Ontario* (1965); L. Waisberg and P. Pross, *The Select Committee Inquiry of 1939-1940* (1965); R. V. Whelan, *The Changing Climate of Public Opinion* (1965).

In addition the Committee inherited from an earlier history project, a series of valuable statistics and papers, chiefly on timber and forest protection, compiled by A. P. Leslie and A. R. Fenwick as well as J. B. Thompson's *History of the Division of Operation and Personnel (1940-1949)* (1954); *Ontario Forest Ranger School* (1954); *History of "Sylva"* (1954); *Game and Fisheries* (1954) and *The Junior Forest Ranger Programme* (1954). *A Scrapbook on the Manitoba Flood Relief 1950* was loaned by P. O. Rhynas. Finally, several items of independent research were kindly given to the authors. These were: K. Evans, *Jurisdiction over the Inland Fisheries of Ontario, 1867-1898* (1966); V. Nelles, *Woodpulp, Paper and Politics* (1966) and W. W. Tweed, *The Development of Federal-Provincial Machinery for Consultation and Cooperation in Ontario Forestry* (1966).

(vi) *Printed Records of the Department*

The first *Annual Report*, for the year 1856, was issued in 1857 and they have been issued annually from that time. Their quality has varied considerably. The 1856 *Report* is a major document of over two hundred pages, reviewing in detail the background of all aspects of Departmental policy, recommending future policy and dealing with criticisms of contemporary administration. No *Report* since has achieved the same breadth and depth of coverage.

For many years the *Report* was the Department's only publication, but from 1896 to 1905 it was responsible for the Bureau of Forestry and thus published the reports of the director. (Between 1882 and 1896 the report was issued by the Department of Agriculture; after 1905 the bureau returned to Agriculture where

it concerned itself with immigration and colonization rather than forestry.) At this time, too, the Department printed its share of the appeals to intending immigrants that were so common in the period (e.g. *Ontario, Canada: A statement concerning the extent, resources, climate and industrial development of the Province of Ontario, Canada*, Toronto: 1901). These, however, were scarcely distinguishable from the many glowing accounts published by other governmental agencies and the railroad companies. Two very important publications were Aubrey White, *Forest Fires and Fire Ranging* (Toronto, 1886) which outlined the famous protection scheme, and *Report and Exploration of Northern Ontario in 1900* (Toronto, 1901). The pioneering James Bay Survey was commemorated by the publication of R. N. Johnston and J. F. Sharpe, *A Report of the James Bay Forest Survey* (Toronto: 1922) while other activities of the Forestry Branch were publicized in E. J. Zavitz, *Forests and Forestry in Ontario* (1923), A. H. Richardson, *Forestry in Ontario* (1928) and J. F. Sharpe and J. A. Brodie, *The Forest Resources of Ontario* (1930).

After 1941, and especially after the end of World War II, the newly-established Conservation Information Section published an increasing variety of items. Complete lists of these are found in the annual *Reports*, the catalogues issued by the Department, and in H. I. MacTaggart, *Publications of the Ontario Government, 1901-1951*.

(c) *Parliamentary Papers*

From 1788 to the early 1840's British Parliamentary papers were a far more useful source of information than those of the Legislative Assembly of the province. Particular reference should be made to House of Lords, Select Committee on Timber Duty, *Report*, 1820; House of Commons, Select Committee Appointed to consider timber duties, *Report*, 1835, and the *Imperial Blue Books* which include the reports and transcripts of these committees and much statistical information giving reasonably reliable information and figures on early timber production in Upper Canada. *The Report on the Affairs of British North America from the Earl of Durham, 11 February, 1839*, is an essential document and Charles Buller's report on Crown lands (App.B) is almost as important as the Report itself.

The Journals of the Upper Canada Legislature are a disappointing source for the years prior to 1840. This is partly due to their poor organization, but also the consequence of the Legislature's lack of control over the Department of Crown Lands. The few items in the *Journals* testify to the frustrations of the colonial politicians. After 1825 appendices contained statistical information or committee reports and a list of these will be found in Pross, *Timber Administration 1792-1850* and *Timber Administration 1850-1900*. Among the more important items are: "Instructions to Peter Robinson, Commissioner of Crown Lands, from the Lords Commissioner of the Treasury" (1829, App.2); "First and Second Report on Grievances", (1831-1832, app.pp.195, 203); Select Committee on Timber Duty, "Report" (1835, app., No. 11); "Seventh Report of the Committee on Grievances" (1835, App. 21); "Report of the Select Committee on Timber Duties" (1836, p. 54) which inquired into the Shireff's management of the Bytown office; Select Committee on the Improvement of the Ottawa River, "Report" (1836, App. p. 150); "Extract from a Despatch dated 28th. December, 1837, from Her Majesty's

Principal Secretary of State for the Colonies relating to the surrender of the Casual and Territorial Revenue of the Crown in Upper Canada, to the Provincial Legislature", (1839, App. Volume II, Part 2) and the "Report of the Commission of Inquiry into the Public Departments" (1840).

During the Union period the Journals were brought into better order. They were more complete and were indexed in the *General Index to the Journals of the Legislative Assembly of Canada: 1841-1851* (Montreal, 1855) and *General Index to the Journals of the Legislative Assembly of Canada: 1852-1866* (Ottawa, 1867). Some of the more significant reports and returns were: "Duties on Timber: Correspondence between Lord Sydenham and Westminster re British tariff changes on foreign and colonial timber" (1841, App. H); "Instructions to James Stevenson, March 30, 1842, re disposal of licences to cut timber," (1842, App. T); "Report of the Commissioners on Crown Lands", (1846); "First and Second Reports of the Select Committee on the Lumber Trade" (1849, App. PPPP); "Report of the Select Committee on the Present System of Management of Public Lands" (1854-1855); "Select Committee on the Colonization of Wildlands in Lower Canada. First Report . . . Instructions to consider certain propositions re timber licences. Second Report" (1862, App. 1); "Report of the Select Committee to enquire into the state of the lumber trade in relation to the settlement of the country and the action of the government in dealing with these interests respectively" (1863, App. 8).

Following Confederation the system of indexing was continued in *General Index to the Journals of the Legislative Assembly of the Province of Ontario: 1867-1874* (Toronto, 1875); *General Index . . . 1867-1882-1883* (Toronto, 1883); *General Index . . . 1867-1888* (Toronto, 1889) and *General Index to the Journals and Sessional Papers: 1889-1900* (Toronto, 1900). References should be made to, amongst others, the "Report of the Select Committee on the Land Improvement Fund" (1869); "Return to an order of the Legislative Assembly, 7 Feb. 1884, re timber administration in the disputed territory," (1884, Sess. Papers 53, 56, 71 and 75); "Report of the Relief Land Settlement Committee, 1932-1933" (1934); Standing Committee on Public Accounts, "Report, Minutes and Proceedings" (1936, App. 1); Select Committee Appointed to Inquire into the Administration of the Department of Lands and Forests, "Reports and Proceedings" (1939-40 and 1941, Part 1); Select Committee on Conservation, "Report" (1950); "Suggestions for a Programme of Renewable Resources Development" (1954 "White Paper". Toronto DLF, mimeo, 1954); Select Committee on Land Expropriation, "Report" (1962).

In recent years several standing committees of the Legislature have been in a position to inquire into matters affecting the Department. The list includes the committees on Public Accounts, Agriculture, Conservation, Game and Fish and Lands and Forests. However, not all of them meet each session and when they do meet the results are not always of value. Proceedings and Reports, when they are published, usually appear in the *Journals* of the Legislature.

From the year 1839 the Journals provided statistics on timber returns and cullers returns which, though not accurate, represent the most reliable estimate of the quantities of timber cut on Crown lands. After 1856 the tables were transferred to the Department's annual *Report* where they have remained. For the years 1857-1867 they can be supplemented by the *Tables of the Trade and Navigation of*

the Province of Canada and for more recent years by figures in the *Canada Year Book*, census reports, and the reports of the Dominion Bureau of Statistics.

Following Confederation the Federal Government issued publications dealing with immigration, agriculture and forestry. Most, however, dealt with the Dominion lands in the west, though a few apply to Ontario. Amongst these are the *Report* (Ottawa, 1868) of a Select Committee "to inquire re the Trade in Hemlock Bark"; Department of Agriculture, *Report on the Forest Wealth of Canada* (Ottawa, 1895); Inspector of Timber and Forestry, *Reports* (from 1899). The establishment of the Commission of Conservation of Canada led to the publication of a series of studies relating to various aspects of conservation, including C. D. Howe, et. al, *Trent Watershed Survey* (Ottawa, 1913) and B. E. Fernow, *Conditions in the Clay Belt of New Ontario* (Ottawa, 1912). The Commission also issued an annual report between the years 1910 and 1919. B. E. Fernow's assessment of some of the Canada Department of the Interior publications is found in "Canadian Timberlands", University of Toronto Studies, Vol. 16 (1912). An important study is Arthur Hawkes, *Special Report on Immigration* (Ottawa, 1912) which discusses Dominion-Provincial co-operation and immigration from the United Kingdom. More recently the Clay Belt settlements have been dealt with in A. B. Goselin, *Settlement Problems in Northwestern Quebec and Northeastern Ontario* (Ottawa: King's Printer, 1944).

In 1924 the Picard Royal Commission reported on the pulpwood situation (Canada, Royal Commission on Pulpwood, *Report*, Ottawa: King's Printer, 1924) and a decade later the same subject received extensive examination by the House of Commons Select Committee on Banking and Commerce (*Proceedings*, March 6 to June 14, 1934, Ottawa: King's Printer, 1934). The Gordon Commission examined the forest products industry as a whole in 1958 (Canada, Royal Commission on Canada's Economic Prospects, *Final Report*, Ottawa: Queen's Printer, 1958, *Hearings*, 46 vols.) and published a background paper on the subject prepared by its Forestry Study Group ("Outlook for the Canadian Forest Industries", Study Number 5, Ottawa: Queen's Printer, 1955). Finally, in 1961 the Canada Department of Northern Affairs and National Resources sponsored the "Resources for Tomorrow Conference" which studied Canada's natural resources position in general and published four volumes of papers and background material prepared for and read at the conference (Ottawa: Queen's Printer, 1962).

A series of Ontario Royal Commissions have enquired into various problems, some of them quite minor. The following is a partial list and can be expanded by reference to the indices to the *Journals*: Ontario Royal Commission re timber limits of Thomas Scott (1874), *Minutes of Meetings* (OA); Royal Commission to enquire into and report upon the agricultural resources of the Province, *Report* (Toronto, 1881); Royal Commission to enquire into the Occupation and Improvement of lands in Townships along the Rainy River, *Report* (Toronto, 1889); Royal Commission to enquire respecting Game Laws, otherwise known as the Game and Fish Commission, *Report* (Toronto, 1892); Royal Commission to enquire re the fitness of certain territory between the Ottawa River and Georgian Bay for a National Park, *Report* (Toronto, 1893. Reprinted, DLF, 1950 and 1956). A series of background papers were prepared for the Commission by Alexander Kirkwood

and are sometimes published with the *Report* or separately under the title, *Papers and Reports Upon Forestry, Forest Schools, Forest Administration and Management in Europe, America and the British Possession and upon Forests and Public Parks and Sanitary Resorts* (Toronto, 1893); Royal Commission to enquire re Forestry, *Report* (Toronto, 1899).

In the present century several inquiries have brought forward useful information. Particularly noteworthy are: Ontario Royal Commission of Inquiry into the Kapuskasing Colony, *Report*, (Toronto: King's Printer, 1920); the Latchford-Riddell Inquiry, more formally known as the Ontario Royal Commission to Investigate and Report upon the Accuracy or Otherwise of all Returns made Pursuant to the Crown Timber Act, section 14, by any holder of a Timber Licence, *Report* (Toronto: King's Printer, 1921-22 and reprinted DLF, 1965. The Proceedings are available at OA); Commission of Inquiry into the Ontario Provincial Air Service, *Proceedings* (mss., 1934. OA); Royal Commission Inquiry into the Affairs of the Abitibi Power and Paper Company, *Report* (Toronto: King's Printer, 1941. Hearings at OA); Royal Commission on Forestry, (Kennedy Commission. *Report*, Toronto: King's Printer, 1947); (Gordon) Committee on the Organization of Government in Ontario, *Report* (Toronto. Queen's Printer, 1959) Public Lands Investigation Committee, *Report*: 1959 (Toronto, 1961).

(d) *Secondary Sources*

(i) Lands Policy and Settlement

The early history of Ontario settlement has been given some attention by historians and several useful bibliographies have been presented in studies as easily accessible as Craig, Spelt and Jones (See "General") and Gilbert Paterson, *Land Settlement in Upper Canada, 1783-1840* (Toronto: OA, Sixteenth Report, 1921). Lilian Gates' study of land policy, *The Land Policies of Upper Canada*, is now being prepared for publication by the University of Toronto Press and will include a survey of colonial office documents.

Further secondary sources on settlement in colonial times include: R. G. Riddell, "The Policy of Creating Land Reserves in Canada" (in R. Flenley, ed., *Essays in Canadian History*, Toronto, 1931); W. H. Breithaupt, "Early Roads and Transportation in Upper Canada" (*Seventh Annual Report: Waterloo Historical Society* (1919), pp. 59-66); I. C. Bricher, "First Settlement in Central-Western Ontario" (*OHSPR*, Vol. XXX (1934), pp. 58-65); E. A. Cruikshank, "An Experiment in Colonization in Upper Canada" (*ibid.*, Volume XXV (1929) pp. 32-37); H. M. Morrison, "The Principles of Free Grants in the Land Act of 1841" (*CHR*, Volume XIV (1933), pp. 327-407) and by the same author "The Background of the Free Land Homestead Law of 1872" (Canadian Historical Association, *Report*, (1935), pp. 58-66); G. C. Paterson, "The Professional Settler in Upper Canada" (*OHSPR*, Volume XXVIII (1932), pp. 120-124); J. H. Richards, "Lands and Policies: Attitudes and Controls in the Alienation of Lands in Ontario during the First Century of Settlement" (*ibid.*, Volume L (1958) pp. 193-209); R. G. Riddell, "A study in the Land Policy of the Colonial Office, 1763-1855" (*CHR*, Volume XVIII (1937) pp. 385-405); G. W. Spragge, "Colonization Roads in Canada West, 1850-1867" (*OHSPR*, Volume XLIX (1957) pp. 1-18); G. A. Wilson, "The Clergy

Reserves: Economical Mischief or Sectarian Issue?" (*CHR* Volume XLII (1951), pp. 281-299).

The trials and tribulations of the land companies are discussed in W. Dunlop, *In Defence of the Canada Company* (1836); R. and K. Lazars, *In the days of the Canada Company* (Toronto: 1896) and Dent, *The Last Forty Years*, while immigration as such has received extensive attention in N. MacDonald, *Canada 1763-1841: Immigration and Settlement* (New York: Longmans, Green and Company, 1939); Helen I. Cowan, *British Emigration to British North America, The First Hundred Years* (Toronto: University of Toronto Press, 1961) and D. C. Harvey, *The Colonization of Canada* (Toronto: Clarke Irwin, 1963).

The years after Confederation have not been well documented. There is no comprehensive study of settlement in Ontario and the development on a national basis is confined to one study, Chester Martin's *Dominion Land Policy* (Toronto: Macmillan, 1938). There are, however, several articles on the Ontario development including J. S. Dobie, "The Past Half-Century in Northern Ontario" (Association of Ontario Land Surveyors, *Report* (1937), pp. 138-156); G. L. McDermott, "Frontiers of Settlement in the Great Clay Belt of Ontario and Quebec" (American Association of Geographers, *Annals*, Volume LI (1951); J. R. Randall, "Settlement of the Great Clay Belt of Northern Ontario" (Geographical Society of Philadelphia, *Bulletin*, Volume XXXV (1937) No. 3-4, pp. 53-66) and J. F. Whitson, "Opinions as to Settlement of the Clay Belt" Association of Ontario Land Surveyors, *Proceedings*, Volume XXVIII, (1912), pp. 127-142). Some very useful commentary on the process of settlement, and government policy, is found in A. R. M. Lower and H. A. Innis, *Settlement and the Forest and Mining Frontiers of Eastern Canada* (Toronto: Macmillan, 1936).

The extensive lists of pamphlets, brochures and contemporary essays on land settlement in Ontario (e.g. Ontario Department of Agriculture, *The Newer Districts of Ontario*, Toronto, 1889) will not be included here as they are available in other works. Similarly, only those unpublished theses and monographs most pertinent to this study are included. These are Lillian Gates, op. cit.; W. A. D. Jackson, *A Geographical Study of Early Settlement in Southern Ontario* (M.A. Thesis, University of Toronto, 1948); G. A. Wilson, *The Political and Administrative History of the Upper Canada Clergy Reserves, 1790-1854* (Ph.D. Thesis, University of Toronto, 1959); O. C. Toon, *Some Aspects of the History of Agriculture in Canada West between 1850 and 1870* (M.A. Thesis, University of Western Ontario, 1937); A. G. Bogue, *Ontario Agriculture Between 1880 and 1890 with Special Reference to South Western Ontario* (M.A. Thesis, University of Western Ontario, 1946); H. A. Smith, *The Holland Marsh* (M.A. Thesis, University of Toronto, 1963); E. B. MacDougall, *A Study of Land Use in Victoria County* (M.Sc. (Forestry) Thesis, University of Toronto, 1962); J. Kent, *Agriculture in the Cochrane Clay Belt* (M.A. Thesis, University of Toronto, 1964); and F. J. Woodruff, *Present and Future Settlement in the Hearst-Nipigon Region* (Ph.D. Thesis, University of Michigan, 1952).

The many local histories that discuss settlement days are too numerous to mention, though their frequently rich supply of pioneer accounts make them worthwhile reading. The watershed reports of the Conservation Authorities Branch, of which

there are now more than thirty, contain historical summaries whose usefulness is heightened by the pains that are taken to relate the surveys to modern management needs. To an extent the *District History Series* of the Department also deals with local developments and some discussion of historical background is usually an important part of land use and forest management plans.

(ii) Surveys

There is a good deal of highly technical literature relating to surveys in Ontario and for this the reader is referred to the various textbooks on the subject and to the *Annual Reports* of the Association of Ontario Land Surveyors (e.g. J. K. Benner, "Organization and Equipment of a Survey Party on Base and Meridian Line Surveys," *ibid.*, (1929) pp. 136-148). The *Reports* also contain biographical sketches of prominent surveyors (e.g. "Biographical Sketch of the Late Thomas Devine, F.R.G.S.," *ibid.*, (1889), pp. 129-130); their reminiscences (e.g. James Dickson, "Reminiscences of an Old Surveyor," *ibid.*, (1916), pp. 180-192) and other articles of historical interest (e.g. G. B. Kirkpatrick, "Explorations in Northern Ontario in 1900," *ibid.*, (1902) pp. 95-106). The *Reports* (available at OA) are well indexed. In addition the reader is referred to the article by Weaver, *Crown Surveys in Ontario* (DLF, 1962) and to the Department's annual *Reports* which for many years carried extensive extracts from surveyors' reports.

(iii) Timber Administration

The development of colonial timber administration is extremely difficult to document from Canadian sources. J. E. Hodgetts, *op. cit.*, has produced a very complete description of the Woods and Forests administration during the United Canada period, and Thomas Southworth and Aubrey White collaborated to write *A History of Crown Timber Regulations from the Date of the French Occupation to the Year 1899* (First published in *Clerk of Forestry, Report*, 1899; republished in AR, 1907 and reprinted separately, with 1907 pagination, in 1957 by DLF. The 1899 version has an index) which, though encumbered by lengthy quotations from public documents, presents a very useful account of the subject. These two studies aside, however, there is no further treatment of the colonial period in a secondary source and the student is forced to turn to various collections of documents. Since the major source of such material is the Colonial Office, a useful bibliography is found in J. J. Malone's *Pine Trees and Politics: The Naval Stores and Forest Policy in Colonial New England, 1691-1775* (Seattle: University of Washington Press, 1964) while the text itself serves as a valuable guide to the system of administration inherited by Upper Canada. Descriptions of the documentary material available for the period up to Confederation will be found in the P.A.C. calendars and inventories, the Ontario Archives, and the references contained in A.R.M. Lower, *The North American Assault on the Canadian Forest* (Toronto: Ryerson, 1938) and in Hodgetts (*op. cit.*).

It is almost impossible, and often simply confusing, to try to distinguish sources relating to the administrative history of the forest industries from those dealing with the growth of the industries themselves. Consequently the following list must be complimented by the much longer list of government documents already

presented. Furthermore, as this is not a history of the industry, no attempt has been made to compile an exhaustive bibliography of industrial development.

Despite its important and venerability, the historian has given scant attention to Canada's forest industry. A. R. M. Lower's *North American Assault* . . . is still the most authoritative account of the lumber trade, though an antidote to its economic nationalism should be sought in J. E. Defebaugh, *History of the Lumber Industry of America* (Chicago, 1906, 2 volumes) which devotes twenty-five chapters to the Canadian industry. Two of F. B. Hough's *Reports on Forestry* (Volume II, Washington, 1880 and Volume III, Washington, 1882) deal with the Canadian scene. Only a short list of other secondary sources supplements these, and beyond them the investigator must rely on the primary sources mentioned in the following region by region discussion.

The more important studies touching upon lumbering in the Ottawa area include: W. E. Greening, *The Ottawa* (Toronto: McClelland and Stewart, 1961); A. R. M. Lower, "The Trade in Square Timber" (Studies in History and Economics: Contributions to Canadian Economics, No. 6, University of Toronto) is chiefly concerned with the Ottawa region, as is an anonymous booklet, attributed to James Little, the Montreal lumberman, entitled *The Lumber Trade of the Ottawa Valley* (Ottawa, 1872). Michael Cross, "The Lumber Community of Upper Canada, 1815-1867" (*OHSPR*, Volume LII (1960) pp. 213-233) is the most recent scholarly article on the region's development, though others such as Enid S. Mallory, "Ottawa Lumber Area" (*Canadian Geographical Journal*, Vol. LXVIII (1964) p. 60); Nick Nickels, "Madawaska: Meanest Drivin' River in Canada" (Ontario Hydro News, Volume LI (1964) Nos. 7-8, pp. 12-15) and *Report on the Investigation of Buried Squared Timber Cribs at Flat Rapids, Madawaska River* (mss., 1964, DLF); "Across the Watershed of Eastern Ontario" (*Forest History*, Volume IX (1965) No. 3, pp. 2-8), a reprint of Clerk of Forestry, R. W. Phipps' trip in 1884 (also in Clerk of Forestry, *Report*, 1885) are also of interest. Local newspapers and the papers and records of local historical societies frequently contain useful information. Lumber companies in the area have had longer lives than most of their kind on the continent, and the stories of at least two have been told in Charlotte Whitton, *A Hundred Years a'Fellin*, (Ottawa: Runge Press, 1943), the Gillies Company, and J. W. Hughson and C. C. J. Bond, *Hurling Down the Pine* (2nd ed., Old Chelsea, Quebec: Historical Society of the Gatineau, 1965), "the story of the Wright, Gilmour and Hughson families, timber and lumber manufacturers in the Hull and Ottawa region and on the Gatineau River, 1900-1920." Archives have acquired the records of the Mossom, Boyd Company, 1840-1920 (PAC); Hayes Family (PAC); George Hamilton (PAC); Wright Family (PAC); McLachlin Family, 1834-1941 (OA); Gilmour and Hughson Company (PAC) and the Hawkesbury Lumber Company (OA).

Other regions are not as well represented. That experiencing some of the most feverish activity in Ontario's history—the Georgian Bay region—has been virtually ignored by historians. Only two sets of papers—the Osborne Family Papers (1849-1926, University of Toronto) and the Charlton Family Papers (1829-1910, University of Toronto)—contain frequent references to the region though a number of local histories have been written and several graduate theses deal with the area

from various vantage points. (See H. R. Cummings, *Early Days in Haliburton* and D. P. Drysdale, *A Study of the Forest Industry in Simcoe County and the Factors Relating to its Present and Future Importance in That Economy* (M.Sc. (Forestry) Thesis, University of Toronto). Some useful information will be found in several of the interviews referred to under "History Committee Records." Northern Ontario has fared slightly better. A. R. M. Lower and H. A. Innis in *Settlement and the Mining and Forest Frontier* deal with the area at length and D. H. Smith, *Lumbering in Algoma, 1885-1900* (mss., DLF) gives a township by township description of companies operating and the annual cut. J. P. T. Bertrand did much to preserve the history of the Lakehead area when he published *Highway of Destiny* (New York: Vantage, 1959) and his manuscript history of the Timber Wolves (mss., c. 1961, DLF) brings the story up to date. Only one or two collections of papers deal with this region: the Roderick McLennan Papers, 1877-1885 (TPL) cover the building of the CPR in the Lake Superior area and the Keewatin Lumber Company is the subject of some of the papers in the Alexander Matheson Papers, 1844-1904 (TPL).

The colourful days of the lumbermen have tended to cast the more recent exploits of the pulp and paper industry into the shade, yet many of the men in Bertrand's pages are as interesting as any who sought gold in the Klondike or built empires on the Ottawa. There are a number of general studies of which the following are most useful: Innis and Lower, *op. cit.*; L. E. Ellis, *The Newsprint Paper Pendulum* (New York: Rutgers, 1960); J. A. Guthrie, *The Newsprint Paper Industry* (Cambridge, Mass.: Harvard, 1941) and N. Reich, *The Pulp and Paper Industry* (Montreal; McGill, 1926). Only one history has been compiled of an Ontario company, which (Ontario Pulp and Paper) is not typical (See: Carl Wiegman, *Trees to News*, Toronto: McClelland and Stewart, 1953). The story of other companies is found in government records and, in a few instances, the archives of particular companies. Some have compiled short manuscript accounts of their history (See: Spruce Falls Pulp and Paper Company Ltd., *History of the Woodlands*, Kapuskasing, mss., Feb., 1963) and others have historical issues of the house organ (e.g. Ontario and Minnesota Pulp and Paper Company, *The Mandonian*). The Hallam Room of the TPL maintains a collection of company annual reports and other business records, and, of course, financial journals such as the *Financial Post* provide useful information.

In addition a few articles and pamphlets shed some light. These include: N. L. Edwards, "The Establishment of Paper Making in Upper Canada" (*OHSPR*, Volume XXXIX (1947), pp. 63-74); F. H. Clergue, *An Instance of Industrial Evolution in Northern Ontario* (1900 OA Pamphlet Collection); *Pulpwood and its problems; being a series of letters and interviews re-published from the 'Globe'* (1907, *Ibid*); R. G. Lewis, *Forest Products of Canada, 1914-Pulpwood* (1915, *Ibid*.); *Why Canada Should Prohibit the Export of Unmanufactured Wood* (1923, *Ibid*.); R. P. Bell and F. J. D. Banjum, *The Pulpwood Embargo, a much misrepresented issue. Reprint of an interchange of open letters to the press* (1923, *Ibid*) and R. P. Bell, *The Pulpwood Embargo—What its promoter and chief advocate claims for it—and the answer* (1924, *Ibid*).

The views and activities of the men controlling the forest industries can be traced

to an extent in the records of their associations: The Lumbermen's Association of Ontario (*Records and Minutes, 1897-1908*, OA); the Ontario Forest Industries Association (B. Avery, *History of the Ontario Forest Industries Association, 1943-1962*, OFIA, mss., 1963); the Canadian Pulp and Paper Association (*Bulletin* (1918-1933), *Pulp and Paper Magazine of Canada* (1903 ff), later *Pulp and Paper of Canada*, and the *Proceedings* of the annual meeting (1947 ff) and the *Woodlands Review* (1929 ff) a supplement to the *Pulp and Paper Magazine of Canada*); the Canadian Lumberman's Association (*Timber of Canada*). Newspapers, particularly those serving forest regions, are a useful source, as is *The Canada Lumberman, Timber of Canada*, the industry's newspaper, published since 1880.

Modern forest management has its roots in the forestry movement that swept Europe and America during the nineteenth century. It had an impact on Ontario at much the same time as it aroused the support of many in the United States. Consequently bibliographies of the movement on both sides of the border are much alike and also readily available. The reader is particularly referred to George Perkins Marsh, *Man and Nature* (ed. D. Lowenthal, Cambridge, Mass.: Harvard, 1965), a seminal book in the field, and A. D. Rodgers, *Bernhard Edouard Fernow* (Princeton, N.J.: Princeton University Press, 1951), the biography of one of the foremost foresters of his day who did much to promote the introduction of forestry practice in Ontario and was first dean of the Faculty of Forestry, University of Toronto. His useful "History of Forests and Forestry in Canada" is found in Shortt and Doughty, *op. cit.*, and the subsequent history of the school he established is told in J. W. B. Sisam, *Forestry Education at Toronto* (Toronto: University of Toronto Press, 1961). Something more of the flavour of the development of the forestry movement will be found in John Langton, "On the Age of Timber Trees and the Prospects of a Continuous Supply of Timber in Canada" (Literary and Historical Society of Quebec, *Transactions*, Series 1, Volume 5 (1862) pp. 61-69) a very early discussion of the subject; J. Little, *The Timber Supply Question of Canada and the United States of America* (Montreal, 1876); the early annual reports of the Ontario Fruit Growers' Association (especially the issue of 1882 reporting on the forestry congress of that year), available in the Commission of Agriculture annual *Report*; and the Clerk of Forestry Reports, published in 1883, 1884, 1885, 1887-8; 1889-90, 1891, 1896, 1897, 1898, 1899, 1900, 1900-01, 1903, 1904. Both the Legislative Library and the TPL have groups of pamphlets for the period, entitled "Forestry Pamphlets." Soon after the turn of the century forestry journals became quite numerous—too numerous to be listed at length. However, after 1939 the Imperial Forestry Bureau began publishing its *Forestry Abstracts* which serves as a useful guide. The more important Canadian Journals include: Canadian Society of Forestry Engineer; *Reports and Papers* (1908-1950); Canadian Institute of Forestry; *Forestry Chronicle*; Canadian Forestry Association, *Reports*, the association's contributions to *Rod and Gun* in its early years, 1899-1905). In 1905 the CFA first published the *Canadian Forestry Journal* (title varies).

In the days when Aubrey White's *Forest Fires and Fire Ranging* (Toronto, 1886) was an important contribution to the literature on forest protection, the foregoing publications on forestry were as much concerned with protection as with reforestation and forest management. William Little's "Forest Fires and Making

Square Timber in the Woods" (CFA, *Report*, 1905, pp. 87-92) and Judith Kingdom's "Settlement and Forest Protection near Cochrane" (*Canadian Forestry Journal*, 1915, pp. 370-371) and even as late as 1945-1946 J. C. W. Irwin's *Save Ontario Forests* (Monthly, July 1945 to June 1946) are fairly typical. However, in recent years forest protection has rapidly become a highly specialized field best studied by reference to the textbooks and journals devoted to the subject.

(e) *Newspapers, Pamphlets and Serials*

Because time did not allow, no systematic examination of newspaper sources was undertaken. Whenever the nature of the efforts being described seemed to warrant it, reference was made to the newspapers which appeared most likely to be useful. Hence, no compilation of newspaper sources is feasible here, though some assistance in this direction is offered by both Lower, *North American Assault*, and Jones, *op. cit.*

Sources available in both pamphlet and serial form have been mentioned here and there throughout the bibliography, though the list is not complete. No further attempt will be made to list the many other pamphlets available.

A great many periodicals and journals are concerned with various aspects of the Department's activities. Historical journals provide lean fare though the *Canadian Historical Review* has occasionally printed articles on land political problems in the pre-Confederation period. Even the Ontario Historical Society's *Ontario History and Papers and Records* has had few useful articles. The *Canadian Journal of Economics and Political Science* has only rarely concerned itself with the problems of one of Canada's staple industries, to say nothing of the problems of land settlement, conservation and so on. *Canadian Public Administration* does, however, discuss problems of resource administration from time to time, while *Forest History* (Forest History Society) comes closest to offering an effective approach to the history of the forest industry. A similar function is performed by the *Business History Review* (Harvard), but these are both published in the United States.

Fortunately, professional associations occasionally become interested in historical or administrative problems and, as a result, useful articles are found from time to time in periodicals such as *The Canadian Entomologist* (The Entomological Society of Canada); *Canadian Aviation* (Aviation League of Canada); *Canadian Fisherman* (Canadian Fisheries Association); Ontario Land Surveyors Association, *Reports*; *Canadian Parks and Recreation* (Parks and Recreation Association of Canada); *Canadian Audubon* (formerly *Canadian Nature*); and finally the *Canadian Geographical Journal* (Canadian Geographic Society).

INDEX

ABBREVIATIONS USED IN INDEX

PMC	Prime Minister of Canada	CCL	Commissioner of Crown Lands
GGC	Governor General of Canada	ACCL	Assistant Commissioner of Crown Lands
PMO	Prime Minister of Ontario	S.G.	Surveyor General of Upper Canada or Ontario
LGUC	Lieut-Governor of Upper Canada	SGWF	Surveyor General of Woods and Forests
MLF	Minister of Lands and Forests	OLS	Ontario Land Surveyor
DMLF	Deputy Minister of Lands and Forests	GGQ	Governor General of Quebec
DMF	Deputy Minister of Forestry		

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- Abitibi District 303
- Abitibi Power and Paper Company 201, 270, 274, 332, 338, 344, 345, 408, 529
- Accounts Branch 313, 331, 362
- Acheson, R. D. K. 376
- Act to Provide for Expansion and Development of Privately-Owned Woodlands, 1966 422, 423
- Adams, Joseph 281
- Addington Colonization Road 89
- Aerial Dusting of Pests, first tried 225, 228
- Aerial Forest Fire Detection, first example of 236, 238
- Aerial Surveying 78, 197, 198
- Agricultural Rehabilitation and Development Act, 1961 422, 423, 429, 444, 545
- Aircraft
- Buhls CA-6 246
- De Havilland Beaver 80, 246, 248
- De Havilland Turbo—Beaver 247, 248
- De Havilland Moths 242, 245
- De Havilland Otter 248, 249
- HS 2L Flying Boats 235, 238, 239, 242, 243
- Norseman 246, 248
- Vickers Viking 238
- Akiminski Island, James Bay 547
- Albion Hills Conservation School 533⁺
- Alderson, Percy 210
- Alexander, J. A. 92, 93
- Algoma District 95, 162, 301, 498
- Algonkin National Park
- See:* Algonquin Provincial Park
- Algonquin Park Act, 1893 172, 173
- Algonquin Provincial Park 10, 78, 167, 173, 183, 237, 277, 299, Chapter 14 *Passim*, 355, 357, 374, 450, 470, 473, 487, 491, 499, 501, 511, 518, 519, 520, 534
- Fishing in 291, 292, 487
- Hotels in 295
- Logging in 495, 496
- Scenery of 296, 298
- Wapiti (Elk) introduced in 291
- American Forestry Congress (1882) 12, 162, 163, 178, 181, 224, 525, 526
- American Homestead Act 95
- Andrews, Gen. C. C. 284
- Angus Seed Plant 196, 229
- Animal Movement Research 520, 521
- Anson, F. H. 270
- Arbor Day 179, 181
- Arpin, D. J. 253
- Arthur, Sir George (LGUC) 28, 55
- Assistant Commissioner of Crown Lands 115, 118
- Assistant Deputy Ministers 360
- Association of Provincial Land Surveyors 67, 70
- Auden, Jack 343
- Aumond Creek, Arnprior 130
- Avery, Ben 201, 529
- Backus, E. W. 268, 270, 272, 274, 338, 479
- Backus-Brooks Company 254
- Backus Woods, South Walsingham 7
- Baines, Thomas 110
- Baker, Monty 241, 245
- Balch, Dr. R. E. 11

- Banff National Park 165
 Bartlett, George 281, 289
 Bastedo, S. T. 459
 Bat Cave Wilderness Area 494
 Bayly, G. H. U. (DMLF) 360, 544
 Beatty, F. W. (OLS and SG) 67, 79
 Beadle, D. W. 162
 Beaver 521, 530
 Beckwith, Capt. N. W. 158
 Beckwith Island 547
 Belaney, Archie ("Grey Owl") 294, 530
 Bell, Dr. Robert (OLS) 77, 204
 Bengough, F. A., Cartoon by 143
 Bethune, Rev. C. J. S. 224
 Bigwood, W. E. 266
 Biologists, Employment of 454
 Birch, Yellow, Regeneration of 505, 506
 Black (Fur trapper) 289, 290
 Black Bear 467, 469
 Black, Robson 317
 Blake, Hon. Edward (PMO) 118
 Blue, Archibald 169
 Board of Railway Commissioners 209
 Bob-White Quail 464
 "Bogus Settler" 45, 110
 Bonnechère River 106, 167, 205
 Bonnycastle, Richard 2, 3
 Booth, J. R. 146, 280, 286, 292
 Bowman, Benaiah (MLF) 238, 318
 Bray, A. S. 376, 481
 British North America Act 117, 449, 541
 Brodie, J. A. 194, 198, 199, 229, 237, 367, 404, 500
 Brodie, Dr. William 224
 Brompton Company of Montreal 342
 Brown, George 117
 Brown, Professor William 162, 182
 Bruce County Fire District 223
 Bruce Peninsula 469, 547
 Buller, Charles 47
 Bureau of Colonization and Forestry 313, 314
 Bureau of Forestry 181, 185, 187, 526
 Bureau of Mines 313, 314
 Burke, W. H. 156
 Burlington Beach Park, 1907 283, 284
 Burrowman, T. J. 474
 Bytown 42, 102, 135, 390
 Cain, Walter C. 195, 248, 273, 317, 319, 321, 322, 323, 330, 331, 353, 362
 Caldwell Boyd and Company 122
 Callaghan, E. J. 268
 Camp Minesing, Buret Island Lake 295
 Camp Nominigan, Smoke Lake 295
 Camboose 35, 36
 Campbell, Sir Alexander (CCL) 116, 157, 178
 Campbell, Hon. Colin 345
Camping In The Muskoka Region 281
 Canada Central R.R. 100
 Canada Company 18, 22
 Canada Department of Agriculture 228
 Canada Forestry Act, 1949 542
 Canada Land and Emigration Company 90, 96
 Canadian Audubon Society 531
 Canadian Council of Resource Ministers 544
 Canadian Forestry Association 182, 187, 223, 317, 526, 527
 Canadian Institute of Forestry 527
Canadian Lumberman 351, 524
 Canadian Marconi 245
 Canadian National Exhibition, first Lands and Forests exhibit at 534, 536
 Canadian National Sportsmen's Show 531, 536
 Canadian National Railways 292
 Canadian Northern Railways 292
 Canadian Society of Forest Engineers 1908 182, 343
 Cape Henrietta Maria Wilderness Area 494
 Carrick, J. J. 264, 270
 Carson, Rachael, author of *Silent Spring* 233
 Carter, "Nick" (Federal Air Board Pilot) 234
 "Casual" Staff 385, 386
 Cauchon, Hon. Joseph (CCL) 91, 104, 105, 106, 116, 135, 146, 148
 Centenary Banquet of Department 323
 Challies, Hon. George H. 478
 Charlton, W. A. 142
 Chemical Pesticides 233
 Chewett, J. G. (Acting SGUC) 57
 Chewett, William 49, 52
Chicago Tribune 341
 Chief Ranger, Responsibilities of 377, 378
 Circular System of Inter-Communication, 1941 368
 Cities Service Oil Company 529

- Civil Service Act, 1857 115, 383
- Civil Service Appeal Board 389
- Civil Service Association of Ontario 389
- Civil Service Commission 385, 388
- Clark, Judson F. 186, 188, 189, 259, 260, 318, 323, 500
- Clarke, Dr. C. H. D. 447, 456, 502
- Clay Belt of Northern Ontario 3, 78, 185, 189, 192, 213, 214, 301, 304, 306, 310, 311, 312, 377, 430, 434, 436, 509
- Clergy Reserves 21, 22, 53, 83, 86, 100
- Clerk of Forestry, Ontario 164, 181
- Cliff Lake, Sioux Lookout 237.
- Cochrane, Hon. F. B. (MLF) 192, 259, 262, 263
- Cochrane, Ontario 210, 212, 374
- Collingwood, Ontario 153
- Colonisation Roads 88
- Colonisation Roads Branch 100, 322
- Commissioner of Crown Lands, appointment of First 22, 23, 524
- "Compression Wood" 509
- Confederation of British North America 116, 117, 148, 154, 157, 158
- Connery, Robert H. 357, 362
- Conservation 151, 154, 156, 158, 173, 189, 456
See also: Select Committee on Conservation
- Conservation Authorities Act, 1946 432
Act, 1960 479
Branch 492
Parks 484
- Conservation Council of Ontario 532
- Conservation Information and Education Section 364, 368, 535, 536
- Conservation Officers 385
- Constitutional Act (1791) 17
- Cooper, J. M. 345, 346
- Cornell University 182, 186
- Counties Reforestation Act, 1911 196
- Cowper, G. B. 161, 162
- Cox, C. W. 342, 353
- Cozens, Joseph (OLS) 69, 70
- Craigleith Park 489
- Crosbie, H. W. 372
- Crown Lands Agents 91, 93, 100, 108, 110, 116, 265, 266, 311, 312
- Crown Lands Department, Start of, in 1827 22
Administrative Scandals in 54, 57
- Changes Name to "Department of Lands and Mines" 258, 259, 313
- Growth of Chapter 7 *Passim*
- Crown Timber
Agencies 137, 140, 210
Auction System 142
Dues 34, 41, 42, 102
- Crozier, J. A. G. 315, 321
- Cullers 34, 135, 157, 261, 265
- Dalhousie, Lord (GGC) 41
- Darby, William 370, 371
- Darlington Provincial Park 489, 490
- Davis, Clark 529
- Davis, Hon. E. J. (CCL) 78, 180, 301
- Dawson, Sir James 156
- Dawson, W. MacDonnel 106
- Dawson, W. W. 127, 128, 133
- D D T 225, 226, 233
- Department of Citizenship and Immigration (Federal) 455
- Department of National Defence (Federal) 544
- Department of Transport (Federal) 294
- Depression, Trade, in 1930's Effects of 201, 218, 313, 324, 335, Chapter 17 *Passim*
- Deputy Minister, Creation of post of 115, 117, 120
- Deputy Minister of Forestry 199
- Deputy Minister of Lands and Forests (and Mines) 311, 312, 313, 315, 354, 359, 367, 368, 369, 425
- Destructive Insect and Pest Act, 1910 225
- Devil's Glen Park 489
- Devine, Thomas (OLS) 71
- Dewart, Hartley 268
- Dickson, James (OLS) ii, 70, 77, 78, 168, 169, 180, 277, 281, 288, 299
- Diefenbaker, Rt. Hon. John (PMC) 544
- Dillon, J. C. 237
- District Forester, Responsibilities of 380, 383
- Dominion Conference on Forest Fires, 1924 238
- Dominion Railway Board 193
- Domtar Paper Company 420
- Dorset research unit 502
- Dougherty, Manning 267
- Doyle Rule for Measuring Timber 187, 188, 266, 318, 321, 391, 400, 403

- Draper, H. C. 328
- Drew, Col. Hon. George (PMO) 332, 343, 349,
Chapter 17 *Passim*, 395
- Drury, Hon. E. C. (PMO) 190, 195, 267, 271,
272, 273, 317, 320, 321
- Dryden, Jessie E. (Mrs. E. J. Zavitz) 190
- Dryden, Hon. John 190
- Dryden High School Conservation Camp 528
- Dryden Paper Company 528
- Durham Report, 1839 25, 55, 82, 83
- Dutch Elm Disease 230, 232
- Dwight, T. W. 198, 201
- Dymond, Dr. F. R. 295
- Early Days of the Provincial Air Service* 237
- Eby, Dr., of Sebringville 12
- Eco-System, In The Primeval Forest 6
- Eildon Hall* 487
- Emily Provincial Park 489
- Entomological Society of Ontario 525
- Erie, Lake 3, 4, 17, 24, 138, 281, 379, 455, 457,
459, 461, 484, 502, 511
- Espanola Mill 339, 395
- Eugenia Game Reserve 464
- Evans, Justice Kelly 451, 473
- Fairy Point Wilderness Area 494
- Farlinger, George 266
- Family Compact 22, 24
- Faull, Dr. J. H. 198, 231, 232
- Federal-Provincial Cooperation 541, 549
Disputes 121, 123, 541
- Federation of Ontario Naturalists 531
- Fenwick, A. R. 194, 368
- Ferguson, Hon. G. Howard (MLF, PMO) 195,
199, 213, 263, 268, 269, 273, 274, 314, 317,
320, 321
- Fernow, Dr. B. E.
At American Forestry Congress 178
Lectures at Queens University 186, 527
Appointed First Dean of Forestry at Univer-
sity of Toronto 182, 188, 189, 317, 430
- Ferns and Flowering Plants of Rondeau Provincial
Park* 487
- Financial and Departmental Commission of
1862-63 101
- Finlayson, Hon. William (DMLF) 195, 199,
323, 325, 339
- Fire Rangers 164, 205, 207, 384
- Fire Tower, Steel, At Myer's Cave 217
- Fish and Wildlife Branch 451
- Fisheries Acts, 1856 and 1857 102, 113, 151
1866 154
1885 449
Branch 117
Conservation 112, 113, 456, 457
Jurisdiction (British North America Act) 449
- Fisheries Research Board of Canada 514, 515
- Fisheries Superintendents 151, 153
- Fish Hatcheries 113, 152, 451, 457, 459
- Fish Parasites 516
- Forest Fires
at Cobalt 205
at Fort Frances 220
at Haileybury 215, 235, 241
at Lady Evelyn Lake 205
at Matheson 210, 212
at Mississagi 222
in Ottawa Valley 205
at Porcupine 205, 209, 210
at Rainy River 205, 208, 209
at Thessalon River 205
- Forest Fires, Causes, of 156, 157, 203, 205
- Forest Fire Prevention, Fire Control Plan 222
- Forest Fire Prevention Act
of 1878 161
of 1900 207
of 1906 525
of 1913 210
of 1917 194, 213, 218, 383, 384
of 1946 221
of 1959 221
- Forest Fire Prevention Equipment 220
- Forest Industries Ltd. 528
- Forest Insect Control Board 229
Laboratory, opened 1946 229
Laboratory, Sault Ste. Marie 543
Pathology Research Institute 231
- Forest Inventory, 1946 405, 407, 434, 542, 543
- Forest Management
Proposals for 400-404, 437
Act, 1947 407-410
- Forest Pests, Definition of 202

- Forest Protection Agreement (Quebec, Ontario and New Brunswick) 539, 540
- Forest Protection Branch (Division) 365, 366
- Forest Ranger School 455, 550
- Forest Reserves Act, 1898 185, 255
- Forest Resources Regulation Act, 1936 339, 341, 343, 347, 349, 400
- Forest Tent Caterpillar 228
- Foresters, Professional 181, 194, 197
- Forestry Act of 1927 199
- Forestry Board 500
- Forestry Branch 180, 193, 195, 198, 199, 213, 314, 316, 330, 331, 362, 365, 371, 404, 500
- Forestry Chronicle* 351
- Forestry Commission (proposed) 395
- Forestry, Federal Department of 232, 542
- Forestry, Ontario Bureau of 100
- Forest Needs, Prediction of 413, 423
- Forestry Quarterly* 182
- Forestry Research Agreements, 1952 etc. 542, 544
- Fort Frances 266, 272, 371, 374
- Fortin, Captain Pierre 151
- Fort William 107, 108, 121, 285, 339, 343
- Fort William Paper Company 276
- Fraser, C. F. 184
- Free Grant and Homesteads Act, 1868 87, 95, 117, 308, 310
- Free Land Grants, Termination of, 1941 425
- Frontenac Colonization Road 89, 96, 98
- Frost, Hon. Leslie M. (PMO) 379, 478, 480, 481, 540
- Fullerton, C. H. (SG) 315, 322, 330
- Fur Conservation Agreements, 1950 546
- Fur Trade in Ontario 472, 474, 539

- Gagne, Rev. William 212
- Galt, Hon. A. T. 104, 108, 156
- Game and Fisheries Department iii, 373, 374, 384, 387, 447, 449
- Deputy Minister of 451
- Game and Fish Commission 450
- Game Fish, Management of 462, 463
- Game Fish Research 516
- Game Laws 155, 447, 449
- Act of 1917 471
- Ganaraska Report, 1944 431

- Region Authority 532
- Gardiner, Isaac 7, 288
- Gemmell, Hon. W. S. (MLF) 360, 414
- Geodimeter 76, 78
- Georgian Bay 4, 98, 484
- Geraldton, Land-Use Plan for 441
- Gibbard, William 153, 154
- Gibson, Hon. Sir John M. (CCL) 286
- Gibson, Thomas W. 169, 280
- Gillies, J. A. 201
- Gilmour Lumber Company 133
- Glackmeyer Report, 1960 436, 438
- Globe* (Toronto) (*and Mail*) 120, 182, 256, 351, 533, 543
- Goderich, Ont. 116
- Goodwin, Gordon 529
- Gogama District 225
- Gold Mining Division (Proposed) 157
- Good, W. C. 267
- Gore, Col. Francis (LGUC) 52
- Gott, Benjamin 177, 178
- Governmental Problems in Wildlife Conservation* 357, 362
- Grand River Valley Conservation Commission 492
- Great Lakes Fisheries Commission 459, 515, 546
- Great Lakes Institute 503, 511, 546
- Great Lakes Paper Company 276, 339, 341, 342, 420
- Greenwater Lakes Park, Cochrane 490
- Greenwood, W. B. 481
- Grigg, Albert 193, 195, 234, 263, 266, 315, 317, 319
- Ground Rents 111, 128, 133, 142
- Grundy Lake Park 485
- Guelph Agricultural College (Guelph University) 162, 182, 186, 190, 192, 231, 443
- Ontario Veterinary College 452
- Gulick, S. 10
- Gunter's Chain 71
- Gussow, H. T. 231

- Haldimand, Sir Frederick (G.G.) 16
- Haliburton County 90, 96
- Harding, R. T., K.C. 265, 267, 268, 269
- Hardy, Hon. A. S. (CCL) 169

- Harkness, Professor W. J. K. ii, 298, 355, 448, 454, 456, 502
- Hartt, Major G. I. 273, 322
- Hastings Colonization Road 89, 96, 98
- Hawkes, Arthur 284
- Head, Sir Francis Bond (LGUC) 24, 54
- Head, Sir George 2
- Hearst, Town of 307, 308
- Hearst, Hon. W. H., (MLF) 263
- Heenan, Hon. Peter F. (MLF) 326, 327, 329, 336, 353 Chapter 17 *Passim*, 395
- Helicopter 80
- Hemlock Bark 178
- Hemlock Looper Outbreak, 1928 225, 228
- Henderson, Alan 77
- Hepburn, Hon. Mitchell F. (PMO) 219, 307, 325, 326, 327, 329, 335, 353, Chapter 17 *Passim*, 371
- Hess, Quimby F. 386, 434
- Hewitt, Dr. C. G. 224
- Highland Inn, Cache Lake 295
- Highways Department Parks
See: Ontario Department of Highways Parks
- Hipel, Hon. N. O. (MLF) 353, 362, Chapter 18 *Passim*, 391
- History of Crown Timber Regulations* 185
- HMS Nancy and The War of 1812* 487
- Hogarth, General D. 264
- Holland Marsh (York) 307, 308
- Holliday Beach Park 489
- Hosie, Prof. R. C. 201
- Hough, Dr. Franklin B. 161, 162, 178
- Howe, Dean C. D. 201
- Hudson Bay 5, 79, 80, 466, 469
- Hudson's Bay Company, 14, 74, 106, 107, 121, 153, 208, 446, 494
- Hungarian Partridge 465
- Hunter Safety Training Programme 475
- Huntsville District 290
- Hurd, Samuel (S.G.U.C.) 54
- Huron, Lake 3, 5, 18, 88, 107, 118, 146, 153, 162, 165, 253, 284, 455, 459, 502, 512, 515
Fire District 162, 379
- Incendiarism 218
- Indian Affairs Branch (Federal) 102, 115, 117, 454, 455, 545
- Indians,
Six Nations 16
- Hurons 5
- Ojibways 284, 489
- Mississauga 16
- Indian Treaties 15, 62
- Indians, Welfare of Northern 546, 548
- Inspector of Crown Timber Agencies 273, 322
- Inverhuron Park 489
- Ipperwash Beach Park, 1938 284, 478, 486
- Ireson, E. T. 234, 235
- Iroquois Falls Mill 270
- Irwin, J. C. W. 343, 346, 347, 352, 529, 530
- James, Dr. A. B. 531
- James Bay 3, 5, 78, 198, 234, 251, 300, 446
- Jameson, Mrs. Anna 1, 2, 5, 9
- Jeffery's Hotel, Rockingham 126
- Jenkins, F. T. 235
- Johnson, Eddie 342
- Johnson, Thomas Hall (ACCL) 118, 120, 123, 164, 169
- Johnston, R. N. 198, 199, 235, 237, 242, 501
- Johnston, Strachan 275
- Joliffe, E. B. 396
- Jones Road Wilderness Area, Kenora 494
- Junior Forest Rangers 385, 386, 541
School 387, 391
- Kakabeka Falls and Park 490
- Kap-Kig-Iwan 490
- Kapuskasing "Model" Colony 271, 305, 306, 307, 308, 371, 374
- Kapuskasing District, Forest Management Plan 434, 436
- Kapuskasing Strike 336, 338
- Keewatin Lumber Company 254
- Kemptville District 223, 379, 445, 465
- Kennedy Royal Commission
See: Royal Commission on Timber (1947)
- Kennedy, Major-General Howard 397, 403, 432, 526
- Kenora 326, 332, 374, 395
- Kenora Mills 274
- Killarney Recreation Reserve Act, 1962 496, 498
- Kimberly Clark Pulp and Paper Co. 395, 529

- King, Mackenzie, The Rt. Hon. Wm. Lyon
(PMC) 285, 326
- Kingston, Ontario 446
- Kirkfield Experimental Fur Farm 452, 474
- Kirkwood, Alexander ii, iii, 10, 165, 169,
184, 277, 280, 299, 492, 499
- Kirkwood Forest Management Unit 197, 355,
407
- Knight, Dr. A. P. 460
- Kortright, Francis H. 531
- KVP Company 395, 528, 529
- Laboratory of Forest Pathology, Maple, Ontario
232, 543
- Lakehead, Mills at The 271
- Lake of the Woods 79
- Lake Sulphite Company 332, 340, 342, 345, 349,
395
- Lake Superior Park 285, 288, 487, 489
- Lake Superior Pulp and Paper 270
- Lanark County Fire District 223
- Land Acquisition Section, merged with Land-Use
Planning Section, 1966 444
- Land Acts
1850 86
1859 98
- Land Classification 428, 433
- Land Regulations, 1852 110
- Land Speculators 113, 114
- Lands Acts
of 1837 25, 55, 82
of 1841 83
- Lands and Recreational Areas Section 366, 367,
428
- Lands and Surveys Branch
See: Surveys Branch
- Lands Branch 316, 331, 362, 373, 374, 425, 429
- Land-Use Planning 427, 445
Definition of 432, 433
In Northern Ontario *See:* Glackmeyer Report
- Land-Use Planning Guide for District Foresters
438
- Land-Use Planning Section, Surveys Division 438
- Latchford, Justice F. R. 267, 451
- Latchford-Riddell Commission of Enquiry Into
Timber, 1920 263, 264, 267, 317
- Laurentide Air Service 237, 239
- Laurier, Sir Wilfrid 187, 527
- Law Branch 363, 364
- Leavitt, Clyde 193, 209
- Leduc, Paul 345
- Lennox and Addington County 96
- Limnological Research 515
- Lindsay District 379
Land Use Plan for 441
- Little Col. J. A. 264
- Little, James 160
"Little Thunder" 153
- Little, William 160, 162, 180
- Lloyd, E. C. 245
- Long Point Park, 1921 283, 478
- Lotbinière, Sir Henri Joly de 527
- Lount 363
- Lower, Prof., A. R. M. 323
- Lower Ottawa Timber Agency 117
- Lumber Trade of the Ottawa Valley* 160
- Lumbermen's Association of Ontario 142, 144,
253
- Lumbermen's Association of Canada 318, 321,
324
- Lumbermen's Petitions 111, 112, 335, 336
- Lyons, Hon. James (MLF) 238, 239
- Lyons, R. W. 194
- MacArthur, T. A. 322
- Macaulay, Col. John (S.G.U.C.) 55
- Macaulay, Leopold 345
- MacCallum, Dr. G. A. 448, 450, 471, 475
- Macdonald, Sir John A. (PMC) 121
- MacDonald, Hon. Sandfield (PMO) 117, 119
- MacDougall, Frank A. (DMLF) ii, 194, 197,
220, 237, 245, 249, 298, 353, 362, 391, 394,
516, 534
- MacDougall, Hon. William (CCL) 120
- MacKay, Dr. H. H. 452, 454
- Mackenzie, William Lyon 24, 87
- MacLaren, Peter 122
- MacMillan, J. G. 364
- McCullum, Mrs. John 212
- McEvoy, J. M. 268
- McGill, Thomas 50
- McKee Trans-Canada Air Trophy 249
- McLean, Robert 71

- McQuaig, John 151
 McQuout, Jim 493
 Madawaska River 106, 167
Mail and Empire, Toronto 268
 Maitland, Sir Peregrine (L.G.U.C.) 22, 31
Man and Nature 158
 Manitoba Boundary Dispute 121, 123, 541
 Manitoba Government Air Service 79
 Manitoulin Island 93, 153, 511, 528
Manual of Common Parasites 522
Manual of Public Lands Administration 425
 Maple, Hard, Research Into 510
 Maple, Ontario 501, 543
 Mapledoram, Hon. C. E. (MLF) 360
 Marathon, Ontario 395
 Marathon Paper Company 528
 Marsh, Miss E. M. 473
 Mark S. Burnham Park 489
 Marks, Samuel 271
 Marsh, Geo. P. 158
 Maryville Lodge, Toronto 49, 51
 Massacre Island Wilderness Area 494
 Massey Rt. Hon. Vincent (GGC) 480
 Matthews, Prof. D. M. 407
 Maxwell, W. Roy 234, 248, Chapter 12
 Passim, 321, 330
 Mead, G. H. 269
 Mechanical Research 522
 Mennonites 20, 306, 311, 357
 Mensuration 511
 Mercy Flights 246, 248
 Meteorological Service 216, 548
Methodist Witness 184
 Metropolitan Toronto and Region Conservation
 Authority 492, 533
 Michigan, U.S.A. 147, 190, 193
 Midhurst Tree Nursery 196, 332
 Migratory Birds Convention, 1916 472
 Military Land Settlement Scheme, 1901
 See: Veterans' Land
 Mills, C. R. 198, 221, 321, 371
 Mills, Licensing Act, 1924 274
 Mill Owners, American 253, 263, 264
 Miner, Jack 471, 530
 Mining Claims 102, 311
 Mink Farming 474
 Minnesota, U.S.A. 284, 285, 292
 Firefighting Understanding with Ontario 549
 Minnesota and Ontario Company 342
 Mississagi River 147, 253
 Mississippi Colonization Road 89
 Mississippi River 122
 Minister of Lands and Forests,
 First Appointed 313
 Monck, Rt. Hon. Viscount (GGC) 116
 Monteith Agricultural Training Depot 305
 Monteith, Hon. Nelson 190, 192
 Montreal River Company 252
 Moose 466, 517
 Moose, Tagging of 521, 522
 Morison, M. B. 407
 Mowat, Hon. Sir Oliver (PMO) 120, 121,
 122, 143
 Multiple Resource Planning 432, 433
 Murphy, J. J. 315
 Murray, Gen. James (CGO) 14
 Muskoka, Ontario 93, 94, 96, 98, 106, 117, 118,
 129, 142, 146, 237, 465
 Muskoka River 167
 National Capital Commission 544
 National Fire Protection Association 223
 National Research Council 223
 National Wildlife Conference, 1939 532, 533
 Navy, Timber for the 29, 30
 Nettle, Richard 113, 151
 New Brunswick 256
 Newcastle, Durham County 154
 Newfoundland Forest Fires 540
 Newman, F. S. 193, 316
 New South Wales System of Selling Land
 52, 53, 55
New York Times 275, 341
 Niagara Parks Commission 169, 479
 Niagara Peninsula 4, 16
 Nipigon Lake 228, 235
 Nipigon Corporation 276
 Nipissing 95, 98, 107, 118, 170, 301, 469, 476
 Nixon, Hon. H. C. (PMO) 345
 Noad, Frederick 219, 220, 326, 329, 352, 353
 Norfolk County 196, 200
 Normandale Plains, Norfolk Co. 190

- North American Forestry Commission, 1926 etc.
223, 550
- North Bay District 290, 374, 476, 501
- Northern Development Act, 1912 310
 - Branch 310, 322
 - Commission 316
- North Georgian Bay Recreational Reserve
498, 499
- Northern or "New" Ontario 62, 94, 185, 258,
301, 307, 313, 460, 466
- Northern Ontario Tourist Outfitters 434
- Northwestern Ontario Chambers of Commerce
344
- Northwest Territories 121, 548
- Nova Scotia 13, 30, 256
- Nushka (Val Gagne) 212

- Oaks, Doc 249
- Oba Lake 356
- Obatango Lake Provincial Park 490
- Old Fort Albany Wilderness Area 494
- "Old Tory Timber Ring" 263, 273
- Oliver, R. J. 93
- Ontario Agricultural College
 - See: Guelph Agricultural College*
- Ontario Agricultural Commission 224
- Ontario Archives 539
- Ontario Department of Agriculture 98, 100, 164,
181, 187, 314, 429, 444, 479, 545
- Ontario Department of Energy and Resources
Management 479
- Ontario Department of Game and Fisheries
292, 502, 511
- Ontario Department of Highways Parks 477,
478, 484
- Ontario Department of Mines 314
- Ontario Department of Municipal Affairs 478
- Ontario Department of Planning and
Development 477, 479
- Ontario Dept. of Public Works 120, 451, 479
- Ontario Department of Tourism 479
- Ontario Federation of Anglers and Hunters
435, 495, 531
- Ontario Fisheries Research Laboratory 298
- Ontario Forest Industries Association 223
- Ontario Forestry Association 527, 528
- Ontario Fruit Growers' Association 162, 177, 525
- Ontario Game and Fish Commission, 1890 530
- Ontario Game Protection Act, 1895 283
- Ontario Government Immigration Office 309
- Ontario Hydro-Electric Power Commission
350, 351, 528
- Ontario, Lake 4, 17, 442, 446, 455, 457, 459,
484, 502, 511
- Ontario-Manitoba Boundary 78, 79
- Ontario Paper Company 341, 528, 529
- Ontario Parks Integration Board, 1956 478,
481, 492
- Ontario Professional Foresters Association 527
- Ontario Provincial Air Service 216, 239, 321,
363, 367, 378
 - Commission of Enquiry into 220
- Ontario Provincial Radio Service 245
- Ontario Research Foundation 509
- Ontario Veterans Land Company 303
- Ontario Veterinary College *See: Guelph*
- Ontario Waterfowl Research Foundation, 1961
472
- Ontario Water Resources Commission, 1957 461
- Opeongo Colonization Road 89, 109
- Opeongo Lake 355, 502, 511
- Operations Branch (Division) 363-4, 367-368,
384, 534, 535
- Ordnance Lands Branch 115, 117
- Orillia 93
- Orono Tree Nursery 196, 332
- Ottawa Crown Timber Agency 133, 137
- Ottawa-Huron Tract 89, 91, 95, 198, 310
- Ottawa River Engineering Board 546
- Ottawa River Valley 4, 9, 43, 88, 106, 141, 146,
161, 165, 205

- Paper Mills 250, 254
- Pardee, Hon. Timothy Blair (CCL) 120, 123,
142, 143, 159, 160, 168, 169, 178, 526
- Parris, Tom 214
- Parks Branch (Division) 374, 425, 481
- Parks
 - Condition of Entry to 407
 - Degeneration of 486, 487
 - Increase of Visitors to 491
 - District Foresters' Conference 476, 477
 - Timber-cutting in 287
 - Hunting and Trapping in 288, 289

- Parry Sound 3, 93, 142, 146, 161, 498
 - District 96, 98, 117, 118, 237, 374, 435
- Parsons, H. H. 237
- Partridge, P. M. 157, 158
- Patricia District 473, 547
- Pearson, Prof. Norman A. 498
- Pembroke District 107, 355
 - Landscape Units in 445
- Personnel Branch 364, 383, 389
- Petawawa River 167, 229
 - Forest Management Unit 410
- Peterborough, Ont. 41
- Peterborough Canoes 68
- Peterson Colonization Road 89
- Pheasants, Ring-necked 291, 452, 464, 465
- Phillips, G. H. R. 249
- Phipps, Robert W. 164, 165, 182, 184, 299
- Phipps, William (of Kimberly-Clark) 529
- Photographic Survey Company 405
- Pickle Lake 332
- Pierce, John G. 80, 81
- Pigeon River Lumber Company 253
- Pinery Park 489, 490
- Platiel, Rudy 212
- Pollution Control Board, 1952 461
- Ponsford, G. E. 246, 330
- Port Arthur District 262, 285, 374, 502
- Porte Dauphine (Research Vessel) 512
- Powell, Chief Justice W. D. 19
- Pre-Cambrian Shield 3, 5, 90, 165, 442, 465, 469, 505
- Prescribed Burning 208
- Presqu'île Park, 1922 283, 478, 489
- Preston, W. A. 284
- Primaeval Forest 1, 13
- Prince, Professor E. E. 460
- Prison Labour, Use of 222, 539
- Private Lands Liaison Committee, 1959 436, 443
- Privy Council, Judicial Committee of 122, 154, 449
- Proclamation of 1826 35
- "Project Regeneration" 417, 418
- Proration (Export of Pulpwood) 341, 347, 349
- Provincial Forests Act, 1929 199
- Provincial Land Tax 312, 331, 361, 363, 364
- Provincial Paper Company 276
- Provincial Parks Act, 1913
 - revised 1950 287
 - revised 1954 478
 - revised 1958 478
- Public Accounts 104
- Public Agricultural Lands Committee, 1960 429, 433
- Public Lands Act, 1853 88, 98
 - 1913 310
 - 1958 431
 - 1961 426
- Public Services Grievance Board 389
- Pukaskwa Wilderness Area 494
- Pulp and Paper Association of Canada 528
- Pulp and Paper Magazine* 351
- Pulp and Paper Mills 391, 394
- Pulpwood Concessions 391, 393
- Pulpwood Conservation Act, 1929 199
- Pulpwood, Export of, *See*: Proration
- Pulpwood Supply Company 350
- "Quality Wood" 509, 510
- Quebec 14, 29, 31, 32, 42, 47, 102, 111, 121, 135, 141, 151, 161, 256, 332, 341, 348
 - Act 16
 - Crown Lands Department 161
 - Forest Fire Prevention Act, 1870 161
- Queen Victoria Niagara Falls Park 169
- Quetico Provincial Park, 1913 284, 285, 295, 296, 479, 487, 496
- Quetico-Superior Council (U.S.A.) 479
- Quetico-Superior Committee (U.S.A.) 480, 481
- Quetico-Superior Movement (U.S.A.) 480, 481
- Rabies in Red Foxes 521
- Radenhurst, John 54, 55, 56, 57
- Radio *See*: Ontario Provincial Radio Service
- Radio Transmitter Tags (RTT) 520, 521
- Raftsmen, Timber 39, 40
- Railways
 - Brockville, Westport and Sault Ste. Marie 99
 - Canada Central 100
 - Canadian National 292
 - Canadian Northern 292
 - Manitoulin and West Shore 99
 - National Transcontinental 304
 - Nipissing and James Bay 99

- Ontario and Rainy River 99
- Ottawa Arnprior and Parry Sound 280
- Parry Sound Colonization 99
- Temiskaming and Northern 100, 208, 210, 254, 304
- Railways and Forest Fires 208, 209
- Railways, Free Land Grants to 99, 100
- Railway Act of 1889 99
- Rainy River District, 1886 95, 96, 97, 146, 263, 300, 301, 308, 324
- Rainy River Land Act, 1886 96
- Rainy River Lumber Company 254
- Ramsay Lake (Sudbury), Flying School at 241
- Rat Portage 121
- Rathbun, E. W. 184
- Raven, The* (Newsletter) 487
- Rebellion of 1837 47
- Records (Files) Branch 331, 362, 368
- Recreational Zoning Plans 431, 436, 443
- Red-Headed Pine Sawfly, 1920's 226
- Red Lake 332
- Red River 106, 108
- Reforestation 196-199, 365, 417
- Reforestation, *Report on R. of Wastelands* 192
- Reforestation Division (Section) 363, 365, 379
- Regional Director, Office of 360, 375, 376
- Regional Foresters 374, 375
- Reid, Patrick 249
- Relief Land Settlement Act, 1932 (Dominion) 306, 308, 368
- Remi Lake, Kapuskasing 234, 237, 243
- Renfrew County 96, 97, 98
- Reptiles of Algonquin Park* 487
- Research Branch (Division) 363, 367, 441, 501, 523, Chapter 23 *Passim*
- Research Branch, Eastern Ontario Study Project 445
- Resource Agreements, Federal-Provincial 545
- "Resource Rangers" Programme 533
- "Resources for Tomorrow" National Conference, 1961 533, 544
- Returned Soldiers and Sailors Settlement Act, 1917 304, 305
- Rhynas, P. O. 367, 540
- Rice Lake Provincial Park 489
- Richards, Hon. Stephen (CCL) 103, 117, 118, 158
- Richardson, A. H. 197
- Richelieu River 135
- Riddell, Justice 265, 267, 268
- Ridout, Thomas (S.G.U.C.) 49, 52, 54
- Rivers and Streams Act, 1881-1884 122
- Robarts, Hon. John P. (PMO) i-v, 549
- Roberts, Hon. A. Kelso, Q.C. (MLF) 212, 360
- Robinson, John Beverley 90
- Robinson, Mark 289, 294
- Robinson, Hon. Peter (CCL and SGWF) i, ii, 22, 23, 31, 32, 34, 35, 41, 53, 54, 141, 323, 524
- Rock Lake, Algonquin Park 289
- Roebuck, Senator Arthur 326
- Rolph, Hon. Dr. John (CCL) 102, 103
- Rondeau Provincial Park 192, 464, 486, 487, 489, 491
- Rondeau Provincial Park, Act of 1894 7, 281, 283, 294, 295, 299, 478
- Roosevelt, President F. D. 480
- Roosevelt, President Theodore 192
- Rorke, L. V. (SG) 323, 330
- Ross, D. G. 315
- Ross, Hon. G. W. (PMO) 258, 301
- Ross, K. G. (OLS) 77
- Royal Bank of Canada 529
- Royal Commission of Enquiry into Ontario Game and Fish Administration, 1890 449, 450, 1909 452
- Royal Commission of Enquiry into Ontario Provincial Air Service 245, 246, 330
- Royal Commission (Ontario) of Enquiry into Timber Returns, 1920
See: Latchford-Riddell Commission
- Royal Commission of Enquiry (Ontario) into Timber (Kennedy Commission), 1947 221, 321, 360, 384, 388, 397, 403, 432, 526, 530
- Royal Commission on Agricultural Resources, 1881 98
- Royal Commission on Forest Fire Prevention, 1896-1897 184, 207
- Royal Commission 1893 on Forest Reservation and National Park 10, 12, 78, 169, 172, 287, 295
- Ruffed Grouse 465
- Russell, A. J. 112, 133, 156, 157, 168, 390

- Russell, Andrew R. (ACCL) 105, 115, 118
 Russell, Henry 214
 Russell, W. H. 264, 265
 Ryerson Township Experiment 96
- St. Lawrence Parks Commission 479
 St. Maurice, Quebec 116, 133
 St. Williams Nursery, Lake Erie District
 225, 232, 332, 411
 Salaries, Departmental 384
 Salmon, Atlantic, disappearance of, from Lake
 Ontario 150, 151, 152, 457
Salmon Fisheries of The St. Lawrence 151
 Sarnia Mill 252, 253
 Sault Ste. Marie City 153, 197, 240, 243, 285,
 502, 543
 Sault Ste. Marie District 96, 108, 231, 251, 308,
 374, 377, 501
 Sault Ste. Marie Pulp and Paper Company
 250, 252, 270, 395
 Saunders, Dr. William 162, 224
Save Ontario Forests 530
 Saw-Log Industry 46, 134, 139, 144, 421
 Sawmills 46, 47, 144, 145, 146, 416, 417
 Scandinavian Forest Practices 157, 178
 Schiller, Duke (Pilot) 241
 Scott, Hon. H. R. (MLF) 358, 360
 Scott, Hon. Sir Richard (CCL) 103, 119, 120
 Scott, W. F. 310
 Sea-Lamprey, Infestation of Great Lakes by
 459, 512, 515
 Remedies 546
 Research into 455, 460
 Select Committee on Timber
 of 1849 125, 127, 128, 156
 of 1854 156
 of 1863 91, 157
 Select Committee of Enquiry into Administra-
 tion of Department of Lands and Forests, 1939
 220, 345, 353, Chapter 17 *Passim*, 424, 425
 Majority and Minority Reports of 347, 351,
 427
 Select Committee on Conservation, 1950 430,
 431, 532
 Select Committee on Management of Public
 Lands, 1855 90, 94
 Sensenbrenner, F. J. 271, 272, 274, 275
- Settlers' Compensation for Fire Losses 207, 208
 Settlers' Loan Commission 310
 Settlers, Lumbermen's Complaints of 132, 140
 Settlers' Pulpwood Protection Act, 1937 338
 Severn River Forest Management Unit 407
 Sharpe, J. F. 194, 198, 199, 237
 Sherwood Forest Camp, Haliburton 386
 Shevlin Clarke Company 254, 266, 268, 282, 317
 Shireff, Charles 41, 42
 Shireff, Robert 41, 42, 53
 Sibbald Point Provincial Park 487
 Sibley Park, 1944 285, 296
 Sicotte, Hon. L. V. (CCL) 115
 Siers, Thomas 249
 Silviculture Section 418, 420, 547
 Simcoe County, Reforestation In 190, 192, 195
 Simcoe, Col. John Graves (LGUC) 17, 19, 50, 190
 Simcoe, Lake, Release of Game Around 291
 Sioux Lookout 243, 245, 248, 332, 374, 395
 Sioux Mountain Wilderness Area 494
 Sisam, Dean W. J. B. 398
 Slash, Accumulation of 218, 226
 Sleeping Giant Rock 285
 Sleeping Giant Wilderness Area 494
 Smelt-Fishing in Lake Erie 462
 Smith, (J. B.), Lumber Company 192
 Smith, Sir David W. (SG) 19, 49, 52
 Smythe, Colonel W. R. 311, 322
 Southworth, Thomas 180, 184, 187, 192, 255, 256
 Spanish River Mill 252, 270, 461
 Spanish River Lumber Company 266, 270, 395
 Speight, T. B. (OLS) 77, 304
 Splake *See*: Trout, Hybrid
 Split-Line Method of Note-taking 72, 73
 Spooner, Hon. J. W. (MLF) 360, 481, 544
 Spragge, William 55, 56, 57, 112, 156
 Springwater Creek, Aylmer, Ont. 7, 8
 Spruce, Black 509, 510
 Red 510
 White 510
 Budworm Disease 223, 225, 227, 230
 Spruce Falls Company, Kapuskasing 271, 274,
 275, 306, 336, 341
 Squatters 94, 132, 140
 Stevenson and Kellogg 388
 Stewart, Elihu 182
 Stewart, K. E. 226

- Streams Improvements Act 111
- Sturgeon, Disappearance of, from Lake Erie 457
- Sturgeon Falls Mill 252, 270, 339
- Sudbury City 253
 - District 96, 308, 374, 501
 - Air Base 243
- Sullivan, Hon. R. B. (CCL) 42, 45, 55, 57
- Summer Resorts, Land For 428
- Supervisor of Settlement 311
- Superior Lake 3, 5, 74, 107, 153, 276, 459, 469, 512
- Superior National Forest (Minn.) 479, 487
- Surveys Branch (Division) 115, 117, 151, 313, 323, 362, 367
- Surveyor General of Upper Canada i, 19, 20, 21, 27, 49, 52, 56, 102
- Surveyor General of Woods and Forests 22, 23, 31, 102, 524
- Surveyors, Role of 61, 81
 - Qualifications of 67
 - Instruments of 68, 69, 71, 75, 76
- Surveyor's Transit 71
- Swaine, Dr. J. M. 225
- Sweezy, R. O. 342
- Sydenham, See Thompson, Poulett
- Sylva* (Magazine) 79, 80, 536
- Talbot, Col. Thomas 18
- Tariffs, Preferential (British) 45, 46, 126, 127, 324
- Tariff (U.S.A.) 144, 145, 260, 324
- Tarentorus Fish Hatcheries (Sault Ste. Marie District) 458
- Tellurometer 78
- Temagami Lake 325
 - Reserve 255
- Temiskaming, Veterans' Settle In 304, 306
- TFM (Lampricide) 514
- Thessalon 355
- Thompson, David 284
- Thompson, Peter 172, 281
- Thompson, Poulett (Lord Sydenham) (GGV) 56, 57, 86, 102
- Thompson, J. B. 368
- Thompson, Hon. W. G. (MLF) 226, 360
- Thomson, Tom 293, 294
- Thornhill, R. H. 53
- Thorold Mill 270
- Thorpe, Judge 52
- Thunder Bay 80, 95, 96, 97, 146, 300, 301, 307, 308, 374
- Thunder Bay Company 276
- Timber *See also*: Crown Timber
- Timber Act, 1849 128, 131, 138, 145, 148
- Timber Act, 1953 414
- Timber Advisory Committee 398
- Timber Bonus 261, 262
- Timber Branch 86, 100, 124, 149, Chapter 19
 - Passim*, 175, 199, 250, 276, 304, 323, 390, 423
- Timber Dues, Revenue from 324, 325
- Timber Enquiry of 1920 *See*: Latchford-Riddell Enquiry
- Timber Licences 131, 133
- Timber Management Division 365, 366, 390, 423, Chapter 19 *Passim*
- Timber Regulations 1846 126
 - 1851 133
 - 1866 142
 - 1914 245
- Timber Trade,
 - Uncertainty In 125
 - Depression In 123, 127, 160
 - Decline of Square Timber 146, 160
 - Wasteful Methods of Cutting 156
- Tinsley, Edwin 464
- Titus, F. E. 322
- Todd, Andrew 53
- Toronto Island Nature and Conservation School 533
- Toronto, University of, Faculty of Forestry in
 - 188, 189, 231, 316, 355
 - Extension Department 532
- Tourist Trade of Ontario 451, 454
- Townships 61, 62
- Trans-Canada Highway 285
- Trapline System 473, 474
- Tree-Breeding Research 511
- Tree-Planting 190, 196, 197
- Trees Act, 1883 183
 - Re-Enacted, 1896 184
 - 1871 160
- Trent Watershed Survey 189
- Trent Crown Timber Agency 137
- Trespass 133, 138

- Trout
 Hybrid (Splake) 513, 515
 Lake,
 Speckled 151
 Tubed Seedlings 506, 508
 Tully, Terry 241, 242
 Tweed District 374, 379, 502
 Land-Use Plan 441, 442, 445
 Two Rivers, Lake of (Algonquin Park) 170
- Undeveloped Lands of Northern and Western Ontario* 165
 Uniform, Adoption of Staff 384, 385
 United Empire Loyalists 16, 17, 18, 19
 United Farmers of Ontario Government 195, 267, 273
 United States Department of Agriculture 161
 Fish and Wildlife Department 228
 Survey of Hunters and Anglers 463
 United States Tariff Policy 6, 269
 Ussher, Dick 299
- Vachon, R. 241
 Vankoughnet, Hon. Philip (CCL) 90, 103, 114, 151, 157
 Veterans' Land Act, 1942 (Dominion) 301, 425, 426
- Wakefield, Edward Gibbon 21, 22, 27, 82, 83
 Waldie, John 252
 Wany (or Wancy) Timber 141
 Ward, E. L. 476
 Wartime Measures Act 349
 Wasaga Beach Park 487
 Water-Dropping From Air 238, 249
 Waterfowl, Protection of 470, 472, 548
 Waterloo, Ontario 116
 Water-Pollution 151, 460
 Water Productivity Research 515
 Welland Canal, 459
 Wentworth, Col. John 30
 Western Timber Agency 117, 137, 138
 Whitcher, W. F. 151
 White, Aubrey (CCL and DMLF) ii, 121, 158, 159, 163, 168, 188, 189, 192, 193, 205, 250, 260, 261, 263, 273, 285, 303, 314, 315
 White, John 6
 White, Dr. J. H. 189, 194, 197, 198, 201, 213, 316
- White Pine
 Regeneration of 232, 503, 505
 Blister-Rust 232
 Needle Blight 232
 White Paper on Renewable Resources
 Development 414, 417, 419
 White River, Land-Use Plan For 441
 White-Tailed Deer 465, 469, 506, 517, 518
 Whitney, Hon. Sir J. P. (PMO) 186, 258, 262, 263, 313
 Wilderness Areas Act, 1959 455, 493
 Wilderness Castle, White Otter Lake, Kenora District 493
 Wildlife Management (federal-provincial) 548
 Wildlife Management Institute (Washington) 464
 Wildlife Research 516, 517
 Wild Turkey, Disappearance of 463
 Attempts to Re-Establish 291, 464
 Wilkie, David 2
 Wilmot, Samuel 154, 457
 Wilson, Chas. A. 343
 Windy Lake Park 485
 Winnipeg Flood Relief, 1950 540
 Winters, Hon. R. 542
 Wolf Bounty 291, 469, 470
 Research 519, 520
 Woodland Caribou 469, 521, 548
 Woodsmen's Employment Act, 1934 338
 Woods and Forests Branch
 314, 316, 321, 330, 331, 362, 363, 366, 106, 135, 157, 162, 163, 194, 210, 313
 Dismissal of Superintendent 117
 Woods Rangers 118, 138, 139, 158, 314
 Workmen's Compensation 388
 World Forestry Congresses 550
 Wright, Philemon 31, 33
 Wyatt, C. B. (SGUC) 52
 Wyoming, Ontario 474
- Yellowstone National Park, U.S.A. 165
Young Naturalist 531
Young Naturalist's Handbook 532
- Zavitz, C. A. 190
 Zavitz, E. J. ii, iii, 190, 201, 209, 210, 213, 218, 219, 221, 237, 238, 314, 316, 321, 322, 323, 328, 371, 500, 518
 Zone Foresters 379

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